FILM TREATMENT

KIT NO. 5

Title: MOTIVATING THE ELEMENTARY LEARNER

Writer: Marye D. Benjamin

Project Title: A Pilot Series of Six Kits of Filmed and Published Materials Illustrating Proper Teacher Utilization of Broadcast Materials

Project Director: Dr. Clair R. Tettemer

The dissemination activities reported herein performed pursuant to a contract with the United States Office of Education

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The Story of the Film

We fade up on a television receiver...which dominates the screen...as there is heard the music of "Getting to Know You." A voice (presumably that of the TV) is heard singing the words (first part of the chorus)...ending with "getting to let you know me."

TELEVISION: Isn't that friendly? And that's what we're here for, of course. Particularly that last part. Getting to let you know me.

Which, ideally, calls for somebody to introduce us. But that brings up the same only familiar problem. Who?

First we consider the authority figure.

On the screen we see the distilled essence of every television authority figure...booklined study...paper piled desk, etc.

TELEVISION: The man whose reputation has rendered him a monument in his own lifetime...whose image rises before you, not as a person, but as a title page...or a calf binding. The expert in the field...who has written so many books, articles, and monographs that you think of his first name as "By...."

The camera is scanning the impressive array of his writings on the desk or close by.

TELEVISION: The beauty of this man is that he knows. And everybody knows that he knows. But can he share that knowledge. Unfortunately, not always.

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The "authority on screen" acts out the descriptions...as television's voice continues:

TELEVISION: His brain is aflame, but his palms may be clammy. His concepts are fluid, but his mouth is dry. In touch with the great intellects of the centuries, he's a little short on eye-to-eye contact. And though he is at one with the pulsations of the universe...he does have this rather distracting tic in his left cheek...lower quadrant.

Better to get an actor, perhaps.

The "authority" is replaced with an "authority surrogate." Suave, handsome, finished, smooth. A bit of "dash" in the performance.

TELEVISION: A performer of artistry and presence. A quick study who can master the lingo and the tricks of the trade...who can grip the lectern with authority...handle the graphics with a professional flourish...move with ease and style...speak with precision and pace.

> But this presenter has his drawbacks, too...as you can tell from a quick look at the front row...

We cut quickly to two viewers...wtaching the screen.

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VIEWER	1:	Who's he?	What	does he	know	about it	?
VIEWER	2:	You've got	me. I	never h	eard o	fhim.	

Back to the television receiver. The actor is removed summarily, to be replaced by a cartoon face (representing the character of the television receiver itself) filling the screen.

TELEVISION: Faced with this common dilemma in the selection of an on-screen personality... I have decided to introduce myself.

(BIG AND VERY TAKEN WITH HIMSELF) I am television! Unique instrument...incomparable presenter...master teacher. As one of the electronic marvels of this age of technology... I can....

The voice cuts off in mid-sentence and the screen goes blank. We cut to the Narrator, who obviously has just turned off the TV set, and who finishes the sentence:

NARRATOR: ...be turned off by pushing a button, turning a knob, or pulling a plug.

Television is a unique instrument. If you want to wax lyrical, you <u>can</u> call it one of the electronic marvels of this age of technology. But it cannot call itself that. And for a perfectly good reason. Do you know what that is?

page four

NARRATOR: Exactly. Television itself...of itself...by itself...cannot talk. The voice you heard belonged to that man over there...with the microphone...

The Narrator indicates and the camera picks up a man with a mike.

NARRATOR: The face you saw was picked up by a camera from this card rack.

He lifts the card with the cartooned face from the rack...or shows it to us on the rack.

NARRATOR: The voice and the face came to us through this channel. For that's what it is...and that's all it is. A purveyor of sounds and sights which originate outside this box. Television cannot introduce itself. It cannot hear. It cannot feel. It cannot think. I want you to remember that. And I want you to remember something else. Something very important in your relationship to this device in the classroom. Television, itself, cannot teach...though it may be used as a channel for teaching. And television cannot learn...though it may be used as a resource or instrument to motivate, to stimulate, to facilitate learning. Why am I being so insistent about this? Because all too often...

Suddenly the television receiver is in a classroom.

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NARRATOR: (VO) When this child...

We see a child in the classroom...

NARRATOR: confronts this screen....

We see the television receiver....

NARRATOR: There is a feeling that...authomatically...by some special magic...learning takes place.

Now...what if...instead of television...we have a textbook?

The television receiver disappears...and in its place we see a textbook.

NARRATOR: What if...instead of the textbook...we have a radio?

The textbook disappears...and in its place we see a radio.

NARRATOR: What if...instead of radio...we have a film projector?

The radio disappears...and a film projector replaces it. Then open scene.

NARRATOR: Does the magic work then? Can we count on automatic learning because the child is fa ce to face with the instruments of learning?

> Teachers know the answer to that, don't they? They know that there's nothing automatic about learning under any circumstances...that merely confronting a child with this resource....

We see the film projector....

NARRATOR: Or this resource....

We see the radio....

NARRATOR: Or this resource...

We see the textbook

NARRATOR: Or even this resource....

We see the teacher....Then, as Narrator continues, we get the classroom.....

NARRATOR: ...is not enough. What is enough? Well, that depends, doesn't it? On a good many things.

Here we are going to explore the faces in the classroom.

NARRATOR: What do we want each of these children to learn? Is he ready to learn it? What are the best ways to grip his attention...alert his interest...enkindle in him the urge and the will to learn... give him the materials, tangible or intangible, that he needs? What are the most effective ways to clarify or extend what each has seen and heard and felt? To make firmer and surer the steps each is taking toward learning?

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page seven

NARRATOR:	Good teachersby experienceor exampleknow many ways		
	to do these things, don't they?		

All of you, I'm sure, are familiar with these activities.

Here we have short classroom scenes of:

(1)	FACT GIVING -	How primitive man provides shelter from the elements.
		Trees, caves, thatch huts, sod houses, timber dwellings,
		igloos, teepees.
(2)	DRILL -	Foreign language – perhaps a discussion of the weather.
(3)	PROBLEM SOLVING -	Teacher describes a locale. Each pupil is to decide,
		from its place, its temperature, and its natural materials,
		how he would build his house if he lived there.
(4)	DEMONSTRATION -	Science – perhaps "Wind: Moving Man for Mr. Weather"-
		using pan of water for atmospheredemonstrating with
		rotation, heat, and coloring matter the patterns of move-
		ment in the atmosphereand why they occur.
(5)	EXPERIMENTATION -	How we keep warm. How we keep cool. Materials
		that conduct heat and cold. What materials or
		situations provide best insulation, etc.

The Narrator walks into the classroom where last scene took place.

NARRATOR: How many times you've used these activities in your classroom... or seen them used in other classrooms.* Fact giving...drill problem solving...demonstration...experimentation. Choosing the method which would do best what you wanted to do. Making the special plans necessary to the approach you had in mind. Yes, teachers know many methods of teaching.

> But television, itself...of itself...by itself...knows none. So if it is to be used in the classroom...

A television receiver appears in the classroom.

NARRATOR: If it is to be...how did that extravagant introduction go?

He turns on the television receiver. We see the card-rack face on screen and hear the voice:

TELEVISION: I am television I Unique instrument...incomparable presenter... master teacher...

NARRATOR: Yes. Well...if it is to be what it claims...or what some people claim for it...good teachers...familiar with the principles of learning...skilled in the methods of the classroom...must make

^{*} I'm trying to keep from identifying the viewer with the experienced classroom teacher completely, as viewers will also include teachers in training, beginning teachers, administrators, etc.

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NARRATOR: it so. Good teachers in the classroom. Good teachers in the television studio. Working together as a team.

Teachers who ask television not:

The classroom teacher approaches the television receiver...speaks to it.

- C. TEACHER: What can you do?
- NARRATOR: But rather....

Studio teacher appears on screen and speaks.

TV TEACHER:	What can we do with you to accomplish our mutual purposes?		
NARRATOR:	For television, you see, is "geared" to any of these methods you know so well		
TV TEACHER:	We use all of them in television lessons.		

C. TEACHER: And we use them, too, in the classroom, for introduction of the television lesson...for follow-through after the lesson.

We see both teachers... in a pose which suggests friendly cooperation.

NARRATOR: Planning the use of television in the classroom, then, is a matter of "teaming up" to decide what is to be accomplished and who is to play what part toward this accomplishment.

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NARRATOR: First, of course, there must be a shared understanding of the purpose of the television series as a whole. Is it to carry a major and consistent part of the teaching responsibility?

The television set changes into a loaf of bread.

NARRATOR: Is it to be used more sparingly...to supplement and enrich the regular course of instruction in the classroom?

The loaf of bread changes into a cake.

NARRATOR: The answer to this will affect its use .

We come out of the cake to show it in cut-out form, as part of an exhibit the Narrator is constructing on a magnetic board or flannel board. We see now the loaf of bread and the cake.

NARRATOR: Then, since all teaching is concerned basically with two factors... content and students...we must decide who will have the primary responsibility for which.

Now, content...

He displays a cut-out of a chest or box.

NARRATOR: ...we could assume in most cases can be handled ably by either teacher.

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NARRATOR: But what about students?

He puts down the chest and picks up some student cut-outs.

NARRATOR: Who knows the students best...as a group...as individuals in that group? Who knows their differences...their strengths and weaknesses? Who is on hand to observe these students...to see which concepts of the television lesson should be supplemented, impressed, fortified...to work with the students toward these ends?

What do you think?

Do you agree we might say that the students are the particular responsibility of the classroom teacher?

He puts into the exhibit the figure of the classroom teacher or a label ("Classroom Teacher") with the students grouped under it.

NARRATOR: And might we say, then, that the television teacher...in the television lesson...has the special responsibility to deal with content...to present information...pose problems...open new vistas?

He puts into the exhibit the figure of or a label for "Television Teacher" (or "Studio Teacher" or "On-Camera Teacher" or "On-Screen Teacher")...with the content chest under that.

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NARRATOR: So here we have a fair and workable division of team effort... with each teacher "specializing" in a particular aspect of the shared responsibility.

> The television teacher will be "manager of presentation." The classroom teacher, with the help of television, will now be more completely "manager of the learning situation."

And they will work together to use television effectively in accomplishing their mutual purposes.

How will they know what these purposes are? How can they be sure they are working with the same intent...toward the same goals?

Here is how they will know.

He puts a cut-out of the "Teacher's Guide" between the two teacher symbols on the exhibit board. Camera closes in on this cut-out...does a match dissolve to a real "Teacher's Guide"...which is opened on-screen...on cue...as the Narrator speaks.

NARRATOR: This is the "Teacher's Guide"...the "core of communication" between the two specialists of this important team. It will describe, for the classroom teacher, the framework within which the television teacher works...not only the objective of the individual lesson...but the sequence of development from lesson to lesson...and the approach to the series as a whole.

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We have pulled back to show the television teacher, with the Guide open, and as this teacher replaces the Narrator on screen, she (or he) reads from the Guide:

TV TEACHER: (READS) Memorization of subject matter and mastery of unrelated facts does not seem to be the appropriate way to grasp broad understandings of subjects. This is true in almost all subject areas and especially in the sciences. Science is constantly changing as new phenomena are observed and discovered, but it is characterized by having a few basic generalizations which compose the structure of science. These generalizations do not exist as isolated vertical threads within a single area of science. They are horizontal generalizations which extend across all scientific endeavor.

> The system of using generalizations to teach broad concepts has implications for you, for the television teacher, and for your students in the following ways:

- It will provide the basic approach toward the understanding of science that the television teacher will follow in the presentation of the televised lesson.
- It will provide you with some insight into the basic approach that will be used by the television teacher,

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and will supply a base upon which classroom activities can be arranged to correlate the telecast with classwork.

 It will provide the student with the framework into which scientific data may be placed in order to "organize" understanding of the nature of science.

A working knowledge of the following seven generalizations will establish more effective communications between you and the television teacher. Please read them carefully.

The camera starts on down the page...through PREMISE AND GENERALIZATION 1... moves slowly enough for us to read part of that...moves more swiftly simply to provide transition...and slows down for us to read:

"PREMISE: Few things exist in isolation. One regularity in nature is the constant interaction of living and non-living things.

GENERALIZATION 4: Interactions of things represent interdependence."

We see the pages being turned...and then we stop on a page which reads...(as the camera focuses on this part of the page)

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TELECAST OBJECTIVE: The television teacher will introduce the Life Sciences by exploring the living things around us and noting changes occuring in these things due to environment. (GENERALIZATION 4.)"

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As we read this, we hear the classroom teacher's voice reading it, and the scene opens to reveal the classroom teacher...Guide in hand. The teacher is at her desk, studying the Guide...making notes.

The Narrator points out that there is more to beginning the use of a television lesson than adjusting the blinds and turning on the set. Suppose you, as a classroom teacher, are making ready for such a lesson. Is the communication between you and the television teacher complete? Did you acquaint yourself with the lesson plan sent out by the television teacher?

Then you know that the teacher is going to explore the living things around us and note changes occurring in these things due to environment. What could you do as an introduction? Let's look at a few minutes of such a lesson...and you decide what you could have done.

We see a portion of the television lesson...and then come back to the Narrator.

"What could you have done to introduce this television lesson?" asks the Narrator. That depends on your purpose, doesn't it, he asks. And what was that purpose? We might have a recap look at the premise and the generalization. With that in mind, perhaps, says the Narrator, you could have done some of these things.

We see on screen a bulletin board display...headed: "What's Wrong with This Picture?" It shows, let's say, a giraffe on a treeless plain...an elephant in icecovered mountains...a hairless chihuahua in Alaska, a "husky" in some tropical country...a monkey in low river-brush country...a stag with many antlers in the jungle... a water lily in the desert...a cactus in a swamp...an orchid by a frozen stream.

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We see on screen a table set up to show examples of <u>animate</u> and <u>inanimate</u> objects... with these labels visible. Above the table, perhaps, is a chart, listing characteristics of living things...characteristics of non-living things.

We see on screen some drawings of plants and animals which the students have at home...arranged under symbols of the seasons...to show how seasonal changes affect them.

We see a vocabulary drill...on animate, inanimate, life cycle, environment, habitat, characteristics, plants, animals, adapt, seasonal.

We might see children pretending to be a stone, a tree, a flower, a log, a bear, a bee, a chair, etc. and explaining what characteristics they are showing. Or we might see them engaged in a guessing game, in which each has pinned to his back a sian showing what he is, and others must ask questions until they guess.

Yes, says the Narrator, you could have done any of these things as an introduction to the lesson. Or you could have done a good many others, which you have ', thought of yourself. Just as you would have used such activities to introduce a lesson in the textbook...or to prepare your students for a radio broadcast or a film. You would have planned activities to whet their appetites, to give them a foundation, same stepping stones of understanding, to insure readiness for what they are about to experience.

And during the lesson? While the television teacher is presenting the lesson content...what could you do...as manager of the learning situation?

The Narrator says that although this depends in part, of course, on what kind of lesson it is and what is taking place on screen, there are some underlying precepts.

If heeded, these can add a great deal to the value of the television lesson. If not heeded...well...we'll use some classroom teachers to show you what we mean:

NARRATOR: The classroom teacher, as manager of the learning situation, needs to be active in a positive fashion during the television lesson. His attitude toward the television lesson determines the attitudes

of the students.

We are going to see Miss A. in the classroom...acting out the role described in the verse. While she is engrossed in her own little activities, we are going to watch the students...emulating her example...not paying attention to the television lesson... engrossed in little side activities of their own.

FEMALE VOICE: It's very important what you do...

As students take their cue from you. For instance....

Miss A. takes this as her recess... She makes a sketch of her wedding dress... Or grades a paper...repairs a nail... Catches up on neglected mail... This lovely respite...while pupils view... Is grand for a girl with things to do!

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FEMALE VOICE: But she sometimes wonders if TV teaching Is over-rated. It isn't reaching <u>Her</u> students. At least, they can't recall What took place on the screen at all I

Now we are going to see Mr. B....whose attitude is most exemplary.

MALE VOICE: A better example is Mr. B. He respects the lesson they're soon to see... Is eager and ready...alert to view... And all of his pupils are eager, tool They listen. They look. And I think it's clear Why TV lessons work fine in here I

NARRATOR: The teacher needs to set the example for response, and other activities suggested by the television teacher. The classroom teacher should not just sit down at the back of the class... but should lead...help...observe...

We are going to observe Miss C. in class...going about these activities as she should.

FEMALE VOICE: Like Miss C. here... She leads the answers when teacher asks... Helps some pupils with viewing tasks.... Unobtrusively shares her skills FEMALE VOICE: In participation, responses, drills... Observes the viewers for trouble cues... Watches for spots that may confuse... Notes the concepts that need extension. Miss C. is in charge of INTERACTION... But the teacher on screen is the chief ATTRACTION...

We are now going to watch Mr. D. in the classroom...doing heedless, thoughtless, distracting things. He shouldn't be over-caricatured, but should act out the classroom teacher more concerned with his own activities than with quietly helping the students get more from the television lesson. He leans across in front of other students to reach for the paper of the student having trouble...moves a student so he can sit next to the one needing help...makes big, attention-getting gestures to single out and quiet noisy students, etc.

MALE VOICE: A factor forgotten by Mr. D. "You're having trouble? Here...let me seel? "Can you move over? I need your chair!" "You people stop giggling over there!" Did he think to put on an outside row Pupils who might need help? Oh, no1.. In and out and around the aisles... He bumbles his heedless, needless miles... Obscuring sight and obscuring sounds...

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MALE VOICE: Making his noisy, distracting rounds... Taking the stage while he steals the scene From the luckless presenter on the screen. When a "helpmeet" like this is on his feet... CONTENT can have the whole BACK SEATI

Narrator says that we don't want the television teacher to take a back seat, either... for the television lesson, like the textbook, presents certain information about which all the students should be aware...certain facts, certain methods, certain ideas which all the students should have in common. What is done after the reading of the textbook material is determined by the needs and interests of this particular class and its individual members. Basically, the same procedure applies to the television lesson, and generally speaking, says the Narrator, no television lesson should be used without some form of follow-through...just as it should not be used without some form of introduction.

Now, what could you do, he asks the viewers, to follow-through on the condepts presented in the television lesson? You have all sorts of methods at your command, he tells them...methods you have used frequently...some immediate...some long-term.

For pupils with an evident problem, you may want to try more reading...in the textbook or other references.

He may use hand-props to demonstrate these things, or he may want to use art to show these activities taking place.

Perhaps you have or know of some good films to clarify or extend certain points in the television lesson.

You may want to drill the students on additional vocabulary words in connection with additional related concepts to be investigated: words like <u>domant</u>, <u>hibernate</u>, species.

You may want to ask questions about the lesson, to see where points of confusion lie. Or you may want to invite questions from the pupils on points they did not fully understand.

You may, he continues, want to help the students enlist special talents or pursue special interests with some of these activities:

Here we will show short scenes of activities suggested, as outlined:

- Begin an interest center with objects of pictures of how animals adapt to their environment. For example: pictures of the snowshoe rabbit or a mud dauber's nest.
- (2) Make a list of those things necessary for both plants and animals to live.
- (3) Explore the matter of extinct animals to find out what animals are extinct or nearly so and why.
- (4) Make an exhibit showing what happens when a plant is domant...when an animal hibernates.
- (5) Ask members of the class to collect poems about plants or animals. Then ask interested members to list characteristics of the plants or animals as they appear in poems. How do these compare with the characteristics a scientist would describe?

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- (5) Ask members of the class to find stories about animals in the library or at home...to report on these stories and the characteristics they reveal. Are these the same characteristics that a scientist would report?
- NARRATOR: These are only a few of the many activities which you could use to follow through on the concepts introduced in the television lesson. Which you will use...of these...or other activities...depends primarly upon what it is that you want to do. You may be concerned with teaching certain knowledges. Then you would use the television lesson in one way. Certain skills. You might use it in a different way. Attitudes...values..understandings... appreciations. These all suggest methods which you have used many times...when you had these objectives in mind.

Remember...you are the manager of the learning situation in your classroom. With the television teacher to help you...by assuming part of the responsibility for content presentation....

We see the on-screen teacher in the process of presenting the television lesson....

NARRATOR: You are even more completely the manager of the learning situation. So don't let this "unique instrument" fool you...

We see on screen the card-rack face...hear the microphone voice.

page twenty three

TELEVISION:	I am television! Ma	aster teacher!		
NARRATOR:	It is no such thing.	It is a channel	for the use o	of teachers

The on-screen teacher, in the lesson, reappears.

Camera begins slowly to pull back to incorporate television lesson in classroom scene. Then, as Narrator continues, it will begin to move in on the face of one child...

NARRATOR: You in the classroom....your "team mates" in the television studio. It can be used in whatever way you teachers deem best to get at the one goal we all share...toward which all educational resources are employed....

We are in close on the face of a child in the classroom...and when the Narrator hits the curtain word, the camera gives us a close-up of the child's eyes...with the television screen reflected in them.

NARRATOR: Learning!

Credits/

FILM TREATMENT REVISION FOLLOWING SEPTEMBER MEETING OF PROJECT COMMITTEE

October 27, 1963

SERIES TITLE: "UTILIZING TELEVISION IN THE CLASSROOM"

THIS FILM: KIT NO. 5

"GLUE TO MAKE IT STICK: (The Elementary Teacher and the Television Lesson)"

Writer: (Mrs.) Marye D. Benjamin

Project Title: A Pilot Series of Six Kits of Filmed and Published Materials Illustrating Proper Teacher Utilization of Broadcast Materials

Project Director: Dr. Clair R. Tettemer

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GENERAL STATEMENT OF THE FILM:

Good elementary classroom teachers should USE television lessons, not just FOLLOW them. We cannot count on automatic learning just because the child is face-to-face with an instrument of learning or just because he has witnessed a commendable presentation. Television, like any other instrument, can bring the lesson and the child together. The classroom teacher must apply the glue which makes the lesson stick:

It is not enough for the classroom teacher to be "an echo" or a "caboose" simply parroting or re-teaching the Lesson content. As manager of the learning situation, the classroom teacher has the primary responsibility for clarifying, extending, reinforcing the concepts involved.

The television lesson can be "geared" to any of the many methods which teachers know so well; so can the preparation for the television lesson and the follow-through.

How each teacher in the classroom makes his or her glue, then, depends upon what is to be accomplished, what objectives the teacher has in mind, what kind of learning is sought (skills, knowledges, attitudes, values, understandings, and/or appreciations.) It depends upon the purpose of the television series as a whole, the purpose of this specific lesson (as specified in the Teacher's Guide), and this teacher's own purposes in using the lesson.

And it depends, in important measure, upon this particular teacher's personal "glue" recipe...compounded of the teacher's special touch and personality, the teacher's own skills and strengths, the available resources, the procedures which have proved effective in personal experience, the activities geared to the abilities, interests, and needs of a particular class or even to particular pupils within the class.

The film will show one particular teacher using a particular television lesson with a particular elementary class, to indicate some of the activities and procedures to be coordinated with the television lesson in preparation and follow-through, toward providing an effective learning experience. The film will suggest other activities which could have been used, and will suggest that the viewing teachers probably will think of others, equally or more effective for them and their own pupils.

OUTLINE OF CONTENT:

I. Narrator introduces topic

OUTLINE OF CONTENT (CONTINUED) - Page 2

II.	Teacher introduces lesson and demon- strates preparation for television lesson	5:00	5:30
III .	Television lesson (excerpt)	7:00	12:30
IV.	Follow-through (immediate)	10:00	22:30
۷.	Follow-through (long-range) and suggest other possibilities	5:30	28:00

- VI. Narrator: Conclusion
- Note: The lesson to be used likely will be the Grade Four Science lesson from Kit No. 3, as viewers already familiar with lesson content, and more time, therefore, can be devoted to utilization procedures.

TREATMENT FOR KIT NO. 5 "GLUE TO MAKE IT STICK: (The Elementary Teacher and the Television Lesson)" Page 1

(NOTE: This treatment will be only "skeletal", as the Project Committee felt that a comprehensive and detailed account of the utilization must await the choice of a good classroom teacher as a production consultant, and his or her plans for utilizing a specific television lesson in his or her specific classroom situation.

> The Committee suggested also that the film for the elementary classroom teachers might well portray utilization of the television lesson treated in Kit No. 3, where we showed the preparation of the lesson for the classroom. It is, if you remember, a science lesson on "Oceans: Dividers of the Continents" for the fourth grade.)

VIDEO	AUDIO
By animation or using a toy train in limboa train chugs across the screena caboose bringing up the rear (what else/?)	(NARRATOR) That is a caboose.
The train doubles back onto the screen and heads off screen in left center bg	(SOUND: WE HEAR THE WHISTLE OF THE TRAIN AND IN THE DISTANCE AN ECHO OF THE TRAIN WHISTLE.)
	(NARRATOR) And that is an echo.
	Neither of these is a good model for
	the elementary teacher who uses tele-
	vision in the classroom.
A bottle of glue suddenly appears in the foreground.	But this is!
Lights brought up to reveal Narrator holding the bottle	It represents the valuable role of the
of glue.	classroom teacher where television
	tessons are part of the learning
	process.

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"GLUE: TO MAKE IT STICK! (The Elementary Teacher and the Television Lesson)" Page 2

VIDEO	AUDIO
	(NARRATOR) Television can bring the
	there it stops.
	The classroom teacher must apply the
	glue to make that lesson stick!
	How is this done and what kind of glue
	is best?
(Suggest that if "Oceans" program is used, with female teacher on screen,	Let's watch a skillful teacher at work
effort made to use male classroom teacher)	see what kind of glue he usesand
	what he does to make a particular
	science lesson stick in the minds of
	his fourth grade pupils
Transition from Narrator to Teacher. May find Teacher at desk, studying Teacher's Guide, making notes.	TEACHER EXPLAINS THAT USING TELEVISION IN THE CLASSROOM IS NOT BASICALLY DIF- FERENT FROM USING ANY OTHER INSTRUMENT OF LEARNING. WHAT YOU DO WITH IT DEPENDS UPON YOUR PURPOSE AND WHAT YOU WANT TO ACCOMPLISH.

OF THE MANY TEACHING METHODS FAMILIAR TO YOU (THE VIEWERS) AND TO ME, SAYS THE TEACHER, ANY ONE MAY BE USED IN THE TELEVISION LESSON, IN THE CLASS-ROOM INTRODUCTION TO THE TELEVISION LESSON, OR IN THE CLASSROOM FOLLOW-THROUGH.

CONSEQUENTLY, SAYS THE TEACHER, IN USING THIS LESSON IN MY CLASSROOM, I'M FREE TO CHOOSE WHATEVER METHOD OR METHODS I THINK WILL FIT BEST AND WORK BEST.

TREATMENT FOR KIT NO. 5

"GLUE TO MAKE IT STICK: (The Elementary Teacher and the Television Lesson)" Page 3

VIDEO	AUDIO
Teacher shows the intro- ductory and descriptive	HOW DO I DECIDE? WELL, I KNOW IN GEN- ERAL WHAT THIS SERIES OF TELEVISION LESSONS IS DESIGNED 'TO BE AND DO'
the seriesin the Guide.	(MAJOR RESOURCE, USING SUPERIOR PRESENTATIONAL MATERIALS, IN AREAS OF COMMON EXPERIENCE, TO MEET GENERAL NEEDS)
Teacher indicates content and objective of lesson as revealed in guides	I KNOW THE MATERIAL TO BE PRESENTED IN THIS LESSONAND THE TELEVISION TEACHER'S PURPOSE IN PRESENTING IT.
	I KNOW FROM OTHER LESSONS THAT THIS IS A GOOD TEACHERWITH EXCELLENT RESOURCES AND CONSIDERABLE HELPI CAN COUNT ON THE FACT THAT HER PRESENTATION WILL BE SOUND, WELL-ORGANIZED, IMAGINATIVE THAT IT WILL ARBUSE MY STUDENTS' INTEREST AND HOLD THEIR ATTENTION.
Teacher calls attention to and camera emphasizes the class and its members	BUT THE MAIN THING I KNOW, SAYS THE TEACHERIS THIS CLASSAND THE BOYS AND GIRLS IN IT. WHAT THEY LIKE HOW THEY OPERATEWHAT'S HARD FOR THEM WHAT'S EASYHOW EACH ONE LEARNS BEST.
(This introductory segment with teacher takes approx- imately two minutes)	IT MAKES SENSE, THEN, DOESN'T IT, ASKS THE TEACHER, TO GIVE THE TELEVISION TEACHER PRIMARY RESPONSIBILITY FOR CONTENTAND TO TAKE OVER MYSELF THE JOB NOBODY ELSE IS EQUIPPED TO HANDLEAS MANAGER OF THE LEARNING SITUATION.
	IN THIS WAY, HER TELEVISION LESSON CAN MAKE A MUCH MORE VALUABLE CONTRIBUTION. AND WITH HER HELP, I CAN DO MY JOB BETTER. I BELIEVE WE CAN SHOW YOU HOW THIS WORKS.

TREATMENT FOR KIT NO. 5 "GLUE TO MAKE IT STICK:

(The Elementary Teacher and the Television Lesson)" Page 4

VIDEO

Teacher proceeds with introduction to the television lesson

This may include something pertinent to the subject...what they are going to watch

It may deal with vocabulary they need before the television lesson

It may be designed to find out what they already know...what they want to know

It may be designed to build motivation toward heightened interest in the lesson on screen

Transition to lesson on screen - lesson excerpt

(Seven minutes devoted to excerpt)

Transition to followthrough activities immediately subsequent to the lesson - follow-through activities demonstrated (Ten minutes devoted to immediate follow-through)

(Thre

AUDIO

(THREE MINUTES FOR PREPARATION ACTIVITIES TO BE DESCRIBED OR DEMONSTRATED)

EXCERPT OF LESSON (TEACHER IN DIVING SUIT AT BOTTOM OF OCEAN)...EXCERPT TO BE DECIDED IN CONSULTATION WITH UTIL-IZATION TEACHER. IT SHOULD BE A SEGMENT WHICH IS MEANINGFUL IN TERMS OF THE FOLLOW-THROUGH ACTIVITIES TO BE SHOWN IMMEDIATELY AFTER WE SEE LESSON EXCERPT.

TEACHER MAY EXPLAIN WHAT IS TO BE ACCOMPLISHED IN THE IMMEDIATE FOLLOW-THROUGH AND WHAT HE SEES AS THE OBJEC-TIVES FOR THE LONG-RANGE FOLLOW-THROUGH ACTIVITIES. TREATMENT FOR KIT NO. 5

"GLUE TO MAKE IT STICK: (The Elementary Teacher and the Television Lesson)" Page 5 Page 5

VIDEO	AUDIO
	SUGGESTS SPECIFIC LONG-RANGE FOLLOW- THROUGH ACTIVITIES. MAY INDICATE HOW SOME MOTIVATED BY THE LESSON AND INITIATED BY THE PUPILS THEMSELVES HOW OTHERS MOTIVATED BY THE CLASSROOM TEACHER FOR SPECIAL REASONS HAVING TO DO WITH SPECIAL PEOPLE.
	TEACHER MAKES POINT THAT SUCH ACTIVITIES MUST BE ADAPTED TO LOCALE, RESOURCES OF REGION, CLASS RESOURCES, TEACHER RESOURCES.
Activities suggested by Committee members:	
Parent available - working in a related field	
Houses under the water (Article in "Time")	
Film Strips of underwater life	
Field trip - if near an ocean	
Field trip - if near oceanography lab or defense research center	
Scuba diving Child dreaming - what it would be like down there	
Activities related to other areas of oceanography	
These could be demon- strated with freeze frame presentation	TEACHER, AFTER DEMONSTRATING SOME OF THE LONG-RANGE ACTIVITIES USED WITH HIS CLASS, MAY SUGGEST OTHERS.

TREATMENT FOR KIT NO. 5 "GLUE TO MAKE IT STICK!

(The Elementary Teacher and the Telvision Lesson)" Page 6

VIDEO

AUDIO

(NARRAOT

TEACHER THEN SAYS TO VIEWERS: KNOWING YOUR OWN INTERESTS AND ABILITIES, YOUR LOCAL RESOURCES, AND THE PUPILS IN YOUR CLASSROOM, PERHAPS YOU HAVE THOUGHT OF OTHER WAYS TO USE THIS TELEVISION LESSON...WAYS WHICH MAY BE EQUALLY EFFECTIVE...OR EVEN MORE EFFECTIVE...IN YOUR OWN PARTICULAR SITUATION.

Transition to Narrator with bottle of glue

> (NARRATOR) If you haven't, I'm sure you will. For your own ways of using television in your own classroom are important to successful learning experiences for <u>Your</u> pupils. Television can make a valuable contribution to the educational process by bringing the lesson and the child together. But only you can furnish the glue which makes that lesson stick!

Close-up of bottle of glue. Roll credits over...or may move glue over and paste credits on screen... using the glue.

NAEB UTILIZATION PROJECT

March 19, 1963

GENERAL CONSIDERATIONS

During our first meeting in Chicago we agreed on certain points to be considered in the production of these kits. I will set down the ones from my notes and you can accept, disagree, add, or subtract, but don't ignore them. These will be important to the writers and producers.

- The kits are to be directed towards teachers or student teachers who have limited or no previous experience with instructional television.
- The kits will be used primarily by educators who are teaching or directing in-service teacher education classes or workshops dealing with instructional television program utilization.
- The kits will have a secondary use by educators teaching or directing pre-service education courses at colleges and universities.
- 4. Throughout the kits there will be an emphasis on the team teaching aspects of utilization.
- 5. The content will be limited to the instructional uses of television.
- The kits will be so designed that they can be used either in sequence or as individual presentations.
- 7. Utilization procedures will be included that can be used with all levels of television support from "enrichment" to "basic teaching."
- The emphasis in all of the kits will be to show and to demonstrate utilization not merely to talk about utilization or show examples of instructional television programs without the classroom activities.
- Use terms "follow-through" not "follow-up" and "enrichment" and "basic instruction" to denote the limits of a continuum.

(Comments)

General Considerations - Continued

- 10. It would be desirable to have films in the kits produced as film and not kinescope recordings. To do this it might be necessary to interest additional financing. The present budget is set up on the assumption that television techniques and kinescope recordings would be used.
- We will use one writer to prepare the treatments and preliminary scripts and make every effort to use one production agency for all kits.
- Use a well known authority on the program to lend continuity and to give the kits prestige. (No suggestion as to who this would be.)

KIT OUTLINES

KIT NO. 1 - EDUCATIONAL BROADCASTING

This kit will trace the history of educational broadcasting from the early days of radio to the present day uses of television. It will show the action of Government to protect the interests of education through the reservation of FM channels and television channels for noncommercial educational use, and their current status.

Outline by: Jim Fellows and Gertrude Broderick

The purpose of this kit is to establish the use of television as part of the continuing effort by educators to improve the teaching - learning process. Television, although a relatively new technology in the school instructional program, is another in the long line of efforts to improve the educational program. It is unique in that like many of its antecedents it is an aid to the teacher and the learner, but at the same time it is also appropriately used as a basic method of instruction. Its use and acceptance requires that we rethink and re-evaluate many of our educational traditions not that they are necessarily wrong, but that with an open and flexible approach some habits which are not longer effective can in time be replaced by new and more useful patterns.

page three

Outline

I. ESTABLISH CONTEXT IN WHICH TELEVISION COMES TO EDUCATION

- A. Television's Antecedents
 - 1. Film
 - 2. Slides
 - 3. Radio
- **B.** Relationship To These Antecedents

II. EXAMPLES OF WAYS IN WHICH TELEVISION REINFORCES AND CHANGES EDUCATIONAL TRADITION

- A. Classroom Design
- **B.** Team Teaching
- C. Subject Matter Categories
- D. Administrative Uses
- E. Schedule

III. WHAT HAS BEEN ACCOMPLISHED SO FAR

- A. Research Conclusions
- **B.** Cost Factors
- C. Foundation & Government Support

Additional Comments:
KIT NO 2 - GOOD TEACHING AND COMMUNICATION

page four

This kit will be based on the principle that teaching can be improved by the use of educational broadcasts and other media because, when used effectively, they can promote effective types of learning experiences in adults as well as in children; in college as well as in grade or high school. Through illustrations, it will show how many teaching problems can be solved, partly or wholly, by the proper utilization of well-planned programs.

Outline by: Elaine Afton and Lewis Rhodes

Purpose: To show how and why the teaching- learning process can be improved by the use of educational broadcasts.	
Program Outline: (Content)	
A. The learning-teaching process	
-Relationships	
-Factors - need, communication of information, reinforcement	
B. Roles in the process	
-Teacher	
- Student	
-Tools	
C. Problems in the process	
-Expanse of knowledge	
-Ability levels	
-Variety of background	
-Classroom size	
- Non-professional duties	
-Etc many more problems	

page five

Kit No. 2 - Continued

D. Media in meeting problems

-paper-pencil

-books

-visuals -radio --strengthsuniqueness of each different purposes

-television

E. Television

-illustrations - showing television meeting various needs

-use of equipment

-use of outstanding person

-front-seat quality

-personal quality

-handling of problems impersonally

Comment: One person can carry this program with good visuals and illustrations from programs.

Additional Comments:

KIT NO. 3 - PREPARING THE EDUCATIONAL (Instructional) PROGRAM

What are the essential elements of a useful educational program? How do they differ in planning and presentation? Television, like radio, is broadcast under rigid limitations of time. The purpose of this kit is to develop, for the classroom teacher and for the beginning camera teacher, an understanding of program planning and production to achieve variety and appeal to the many groups who use it.

Outline by: Arlene McKellar and Marguerite Fleming

Outline' IDEA DEVELOPMENT -Individuals as sources - Classmon teachers - Surveys - Curriculum people - Specialists (Education, Subject Matter, Television) - Special interest groups **IDEA EVALUATION** - Committee of specialists 1. content 2. education 3. curriculum supervision 4. television staff

Idea Evaluation - continued

- -Scrutinize for:
 - 1. need
 - 2. contribution to learning
 - 3. adaptability to television
 - 4. form major resource, supplemental
 - 5. place in curriculum
- -Result:
 - -- Crystallized purpose

REFINEMENT OF IDEA FOR TELEVISION

- Committee blocks out the series
- Television personnel (producer-director) works with committee on format and approach.

-Selection of on-camera teacher

- 1. show auditions
- 2. ennunciate qualities needed in on-camera teachers

(positive approach)

(personal medium)

ROLES OF EACH IN PRODUCTION

- -Producer and/or director
- On- Camera person
- - Content consultant
 - -Writer if any (show interaction)

page eight

TEACHER'S GUIDE

 Close coorperation between the writer of the guide and the on-camera person, content specialist, originating committee, etc.

PRODUCTION OF SERIES

- Vignettes of conferences (on art, set plans, etc.) with producer-director
 - Rehearsal
 - Taping or production
 - Jobs of various television personnel

EVALUATION OF PILOT PROGRAM

- Evaluating a program following it taping
- Use experts in various fields
- Try out in classroom
- Teacher evaluation
- Decisions for series
- Show that this continues as the series is produced

ULTIMATE AIM

 A television series is the teamwork of many persons. After careful design it is executed by many. All this to become one link in this chain of learning.

KIT NO. 4 - SELECTING AND UTILIZING THE PROGRAM

page nine

This kit will deal with the mechanics of utilization, preparation of class prior to the broadcast, the presentation, and post-broadcast follow-up. It will include information on the physical environment, set placement, lighting control, antenna adjustment, and set tuning.

Outline by: Clair Tettemer and Dee Wolfarth

SELECTING THE PROGRAM

One of the most crucial steps in utilization is selecting the program. Whether the selection is made by the classroom teacher, the curriculum director, principal or superintendent the same selection principles should be followed. In some instances the selection will be made for an entire series while in others the selection will be an an individual program basis. In all cases the selection should be made in view of what television can do for the learner.

Points to keep in mind are:

- 1. Select for specific purposes
- 2. Asses class and teacher needs
- 3. Evaluate the programs potential
- 4. Use the study guide

UTILIZING THE PROGRAM

While specific steps which will fit all programs and classes cannot be listed, there are certain procedures that teachers will want to cosider. Utilization consists of these activities and procedures which are carried on in the classroom before, dwing and after a television program, and which provide for a smooth transition into and out of the television program. It makes possible adjusting the program's content to the ability of the class and helping the students get the maximum learning from the viewing experience. The process of utilization is generally directed by the classroom teacher, but it also can be guided by the television teacher, by the students, or by a combination of all three.

For convenience of discussion, utilization procedures can be divided into three parts - before, during and after the telecast.

BEFORE TELECAST - PREPARATION

- -- Teacher Preparation
 - 1. University training
 - 2. Workshop training
 - 3. Immediate preparation
 - a. study guide
 - b. follow-through plans
 - c. collecting supplementary materials
- -- Classroom Preparation
 - 1. Antenna
 - a. types
 - b. simple adjustments
 - 2. Set Location
 - a. optimum viewing
 - comer location
 - no glare
 - low ambient light levels
 - seating arrangements. (distance, angle)

page eleven

- (Set Location continued)
 - b. proper sound distribution

-speaker size & placement

-corner location cancels sound reflection

3. Tuning the Receiver

- a. simple adjustment
 - -tuning
 - -contrast
 - -balance
 - -noise and interference
- b. technical adjustments
 - -recognize only
- --- Student Preparation
 - 1. learning to view
 - 2. program background
 - 3. vocabulary
 - 4. transition from class work to television and back
 - 5. understanding of objectives

DURING THE TELECAST

- 1. Teacher's Role
 - a. participant

page twelve

(Teacher's Role - continued)

- b. cheerleader
- c. observer of student behavior
- d. content observer & critic
- e. class manager
- f. assist the television teacher
- 2. Student's Role
- 3. Television's Role
 - a. media
 - b. television teacher

AFTER THE TELECAST

- I. Program clarification (not re-teaching)
- 2. Provide for individual differences
- 3. Immediate follow-through activities
- 4. Long range follow-through activities
- 5. Evaluation of experience
- **5.** Preparation for additional programs

Additional Comments:

KIT NO. 5 - MOTIVATING THE ELEMENTARY LEARNER

The determining factor for classroom use of a broadcast lies in the teacher's purpose. What a teacher does with a program depends upon the objectives he has in mind. He may be concerned with teaching certain skills, knowledges, attitudes, values, understandings, and/or appreciations. By using different formats, this kit will present examples of teacher use of programs resulting in high motivation of elementary grade learners.

Outline by: Charles Hettinger

Contraction of the local division of the loc	
1. Teach depend	ers use many methods in teaching. The method ds upon the purpose of the lesson.
	- Fact giving
	- Drill
	- Development of skills
	- problem solving
	 Development of attitudes, appreciation understanding
	- Experimentation
	- Demonstration
2. The te of the lesson	levision lesson can be "geared" to any one se. So can the introduction to the television and the follow-through.
3. The cl determ	assroom use of a television lesson will be ined by three basic factors:
	a. The purpose of the series – basic or enrichment.
	b. The material contained in the particular television lesson.
	c. The judgement of the classroom teacher concerning the needs and interests of his class or even particular members of the class.

- 4. It is taken for granted that television teachers have informed the classroom teachers about the intent and purpose of the television lessons. It is important that the classroom teacher familiarize himself with the "communication."
- 5. All teaching is concerned basically with two factors: content and students.
 - Perhaps it might be said that the television lesson has the special responsibility to deal with content - to present information, to pose groblems, to open new vistas, etc.
 - Perhaps it might be said that the student is the particular responsibility of the classroom teacher.
 - With the help of the television, the classroom teacher is now more completely the manager of the learning situation.
 - 2. The classroom teacher, who best knows his group and the individuals in the group, must determine which concepts of the television lesson should be supplemented, impressed, and fortified.
 - 3. Television frees the classroom teacher to work more closely with students, to discover their weaknesses and strengths. While the television teacher is making the presentation, the classroom teacher has more time to observe, assist etc. It is a hard fact that we cannot be in the play and in the audience at the same time.

page fourteen

shaned be part of the TV learn, teen-conceptindicates what the teader shared do

page fifteen

- 6. The classroom teacher, as manager of the learning situation, needs to be active in a positive fashion during the television lesson.
 - a. His attitude towards the television lesson determines the attitudes of the students.
 - B. He needs to set the example for response, and other activities suggested by the the television teacher.
 - c. He should not just sit down in the back of the class. He should move about, observing, helping, suggesting, etc.
 - d. He may even use such devices as placing those who need the most help in a row along one side, so that he might give those students more help during the television lesson without disturbing the rest of the class.
- 7. The use of television lessons is a form of team teaching. While the television teacher is busy with one activity the classroom teacher can "specialize" in another.
- Television presents those things which students have in common – certain facts, certain methods, certain ideas, etc.

The classroom teacher is responsible for adapting the follow-through to this common knowledge. ?

dyme on their,

page sixteen

- a. The television lesson can be compared to the textbook; it presents certain information about which all the students should be be aware. What is done after the reading of the textbook material is determined by the needs and interests of the particular class. This is basically the same with a television lesson.
- Generally speaking, no television lesson should be used without some form of introduction and followthrough. A parallel illustration is the use of films in the classroom.
 - The activity may take many forms: some are immediate, some may be long term activities (as the beginning of a project.)

SCRIPT SUGGESTIONS:

Narrator - You have all used these activities in your classroom.

Short scenes of:

-fact giving

-drill

-problem solving

-demonstration

-experimentation

lesson show he have a view must must he done.

page seventeen

Narrator – You recognized fact giving, drill, etc. Each method was chosen to achieve a desired learning. Each method required different planning.

> (Note: The idea for this manner of presentation is to start with the known. Teachers are familiar with those methods. They feel comfortable thus far.)

- Narrator All these methods are used on television lessons. All these methods lend them– selves to television introduction and foliow-through.
- Narrator There is more to beginning the use of a television lesson than adjusting the blinds and turning on the set. Did you acquaint yourself with the lesson plan sent out by the television teacher.

(Scene of teacher at desk studying lesson plan, making notes.)

Narrator – Suppose your lesson plans told you that the television lesson was to demonstrate the steps in weather prediction. What could you do as an introduction. Lets look at a few minutes of such a lesson; and you decide what you could have done.

(Scene – television teacher in demonstration.)

Narrator - What could you have done? (Possibly, throw up cards on a magnetic board.) You could have raised the question of how students get weather reports, discussed today's weather, etc.

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Kit No. 5 - continued

Narrator - What couldyou have done during the the television lesson?

(Scene - Voice of narrator over scene -You could have helped get student responses started. You could have helped certain students, etc.)

Narrator – What could you do after the television lesson as follow-through. You have all sorts of methods at your command; ones you have used frequently.

(Scenes:

- class doing demonstration
- class doing experiment
- class solving problem
- class drilling)

(Any other ideas suggested on accompanying sheets can be worked into narration – or suggested by the activities in scenes.)

Comment: Don't act too fancy in choice of demonstrations for television scenes or classroom follow-ups. Don't frighten teachers by suggesting practices too complicated or so new that few have tried them.

Additional Comments:

in the start for the second

KIT NO. 6 - MOTIVATING THE HIGH SCHOOL LEARNER (The High School Learner & Television)

The purpose of this kit is identical to Kit No. 5, except that it deals with programs for upper elementary and high school learners, and illustrates how a teacher integrates broadcasts into previous learnings and the ongoing experiences of pupils so as to assure maximum learning.

Outline by: Wanda Mitchell

BASIC CONCEPTS TO BE INCLUDED:

- That the classroom teacher must know the general purpose of the series (enrichment, direct teaching, major resource, etc.) as well as the goal or purpose of the specific lesson – as it has been developed by the television teacher.
- That the classroom teacher must select the follow-through that will be most meaningful for his particular class at this particular time.
- 3. That activities which are appropriate for developing skills are not necessarily those most appropriate for developing attitudes or reinforcing knowledge or establishing values; that is, the activity is not good or bad per se but as it relates to the goal to be achieved.
- 4. That the television teacher and classroom teacher are a team in the learning situation with the television teacher's major responsibility centered on the content and the classroom teacher's major responsibility focused on individual students.
- That the television teacher's primary concern must be on the elements common to all learners while the classroom teacher's primary concern must be on the individual differences of learners.

page twenty

Kit No. 6 - continued

- 6. That the television segment of the learning process frees the teacher from research, collecting and preparing background material, making and collecting visuals, discovering and obtaining resources to give her more time to concentrate on how students learn, what stumbling blocks they meet in the process, clues to individual difficulties, patterns of response: the learning process.
- That the television segments of any unit of study must be - or be made to be - an integral part of that unit.
- That students must be aware of the relationship of the television segment to the total learning situation.
- 9. That the classroom teacher must control the use of the television segment to create a wholesome, dynamic learning situation; and conversely, the television segment must not control the classroom.
- 10. That the classroom teacher must remember that the learning takes place – not in the studio or on the television screen; the learning takes place in the minds of boys and girls in the classroom – his!

PRODUCTION SUGGESTIONS:

1. Scenes of typical high school classroom activities:

page twenty one

	- drill	-dramatization
	- demonstration	- reports
	- tests	- student planning
	- writing	- buzz sessions
	- discussion	- problem-solving
	- lecturing	
2.	The television lesson may	have as its goal:
	- to develop attitudes	
	- to establish values	
	– to train in skills	

- to impart knowledge
- 3. Which of the activities in (1) are most suitable to each of the goals in (2)?

In Classroom		
> drills of different kinds		
dramatization or problem solving		
student planning – regarding what to do about it making posters writing slogans		

page twenty two

4. Need to individualize

Close-ups of half a dozen completely different high school students watching telecast of "Practical Politics".

- Negro migrant from South/ whose teacher must follow-through with further explanation, amplification.
- Dizzy blond/ whose teacher may use question-answer to show how she personally is affected by politics.
- Lawyer's son/ who plans a project for student citizenship with teacher serving only as a consultant.
- d. Regular kids/ who may followthrough in a debate regarding the issues of who should go into politics as a career/ may be assigned to go do further reading.

5. Solutions to scheduling programs in high schools.

- a. Interview with Mr. Jay Formana Holland High School Holland, Michigan
- b. Transparencies on scheduling.
- c. Report of Mr.

State Dept. of Instruction State of Maine Augusta, Maine

d. Schedule samples from one small school and one large school.

(if you know who please fill in his name.)

page twenty three

6. Miscellaneous hints:

That any series for high school include an introductory lesson on "How to Learn From Television", using Mortimer Adler's NET films "How to Learn From Television" and "How to Learn From Books" with class discussion on similarities and differences.

That the students (high school, not elem.) be included in conferences between studio teacher, classroom teacher, and supervisors. Their ideas often are better than ours as to what will have impact, what will reinforce.

Who is closer to the source of learning?

Additional Comments:

(FOLLOWING THE LESSON)

ON THE BLACKBOARD

MAIN IDEAS:

- (1) In adapting to his environment, man makes conscious and willful changes. Then he must adapt to his own changes.
- (2) Perhaps man can never control the natural forces. He must learn to work intelligently with these natural forces to bring about changes which will help him.
- (3) To profit from the ocean's promises, man must solve its problems.
- (4) The oceans contain many resources that man can put to use.
- (5) Scientists are exploring ways to use all the resources of the oceans.

HOW DID THE LESSON MAKE YOU FEEL ABOUT THE OCEAN?

Excited - hopeful - crazy - lost - scared - adventurous neat - eager - inspired - happy - scattered out - proud enthusiastic - dumb - wet - curious - wondering.

NEW NOTIONS ABOUT THE OCEANS (Surprises in the lesson)

What surprised you most?

Frontier	Whale ranching
Fish farms	Pressure cooker
Oil wells	Weeds that eat food
Fish fences	Submarine tractor
Harvesting fish	Whale milk

WHAT DID THE LESSON TELL US ABOUT:

Time? Change? Space?

WHAT DID THE TEACHER SUGGEST THAT WE DO?

WORDS FOR EXPLORATION:

gyros pressure cooker inedible aquaculture

THE OCEAN IS A FERTILE FIELD FOR:

1

- Plants
 Animals
 Ideas

TELEVISION LESSON

Except for the first paragraph*, this section of lesson is not seen on screen.

Teacher in ocean depths set. She is in classroom dress...seated on a tractor. Near her there is a vacuum cleaner...a pressure cooker. The dogfish is tethered to a tall sea plant. An axe is within reach.

In answer to the three questions in the introduction, the teacher on screen answers:

*"Right here. Where I am. In the depths of the briny, treacherous, beautiful, vast, and fertile ocean. How did I get here? The same way YOU get lots of places where YOU want to be but can't go. By imagination!"

She says there is plenty of room for imagination in this new strange world of water...not only because of the size (The Continental Shelf alone is as big as Asia)...but because so little is known about it that we are discovering new things every day. Things here are very different from the world as we know it. Just as our ancestors...moving from Europe to America...or from the forests of the new land to the grassy plains farther west...found that their old ways of living, thinking, and doing didn't fit their new situation, so our scientists exploring the ocean today are constantly meeting new dangers, new conditions, new problems.

Just picture to yourself, she says, this skillful hero of the timbered regions (SHE SHOWS A PICTURE OF A RUGGED PIONEER FELLING A TREE TO BUILD A CABIN OR CHOPPING FIRE WOOD) out in the middle of the rolling prairie without a tree in sight. Don't you imagine he must have felt that this axe (SHE EXHIBITS AXE) was about the most useless tool he could imagine.

About as useless as what else you see? (SHE LOOKS AROUND AT THE VACUUM CLEANER, THE PRESSURE COOKER...THEN DOWN AT THE TRACTOR.) That's right. The familiar tools, the familiar ways of doing things...won't work. But, she says, we're not entirely sure just yet what WILL. We still have much to learn about this vast ocean and our reactions to it. In fact, it has been said that our knowledge of the ocean today is about equal to the knowledge men had about this continent at the time of the Lewis and Clark Expedition. It might be interesting to find out just how scanty that was! But...compared to the Cambrian Age, even Louis and Clark look pretty progressive don't they? And there will be more changes, because man makes many changes himself.

Scientests, however, get a great deal of satisfaction from solving problems...and they are approaching the problems of the ocean in the same way that they approach other problems. She gives a brief resume of the scientific method.

Their first problems, of course, had to do with survival under the water. Teacher says that from observation of film and television, from reliable reading sources, from adult scientists, and from their own experiences, she expects the pupils know what some of these problems were and how they have been solved. She feels sure that with the help of their classroom teacher they can find out about others.

As we follow our scientists in their efforts to solve the problems of this new environment, we find that the solution does not always lie in a brand new invention or technique. Sometimes it's simply a new way of using a familiar tool.

TEACHER EXHIBITS THE PRESSURE COOKER. DESCRIBES HOW THE PARROT WAS CONVEYED SAFELY TO THE "STARFISH" AND THE DEEP DIVING TOWER. MIGHT SHOW PICTURE OF DIVERS CARRYING PRESSURE COOKERS.

She says that the exploration for new facts to support new hypotheses sometimes shows an earlier hypothesis to have been wrong.

-2-

. . . .

EXHIBITS DOGFISH ... WHICH USES ITS FINS NOT FOR STREAMLINING BUT TO WALK ON THE OCEAN FLOOR.

INTO LESSON ON SCREEN:

The remainder of this is the portion of the lesson seen on screen.

Teacher says now that science has solved some of our problems of survival in the ocean...now that we can exist safely...go increasingly deeper ...stay increasingly longer...we're ready for some of the work we came down here to do in the first place. We're ready to explore some of the practical promises of the sea. As a result, the ocean is a very busy place.

She indicates the bathyscaphe (OR saucer) which is included in the set... and says it is taking visiting scientists and other guests on tours of exploration and observation.

The teacher leaves her tractor and moves to the foreground, as the camera pulls back, to reveal in the right foreground the superstructure of an ocean floor drilling rig...with TV lights and camera...and lines extending to the ship floating above. The teacher says that to get at the ocean's enormous oil reserves, a daring new technique has been worked out in which the entire operation is performed from an anchored ship. All the drilling equipment is lowered to the sea bed, where it digs itself in by remote control. Through underwater TV cameras, the operators can watch what is happening, and the drilling can be carried out exactly as on land, despite the fact that the wellsite may be a thousand feet down...much too deep for divers to reach. What do you suppose were some of the problems they encountered here? How do you suppose they were solved?

The teacher says that scientists are putting their imaginations to work on the problem of mining the immense qualities of rare metals in the ocean.

-3-

Already the ocean is represented in the magnesium from which most of our planes are built. Though the recovery of gold from all this vast amount of water now seems hopeless, we may have some help from the ocean itself. She reaches down and picks up a lobster. Cobalt is even scarcer than gold, she says, but this clever fellow manages to extract it. So perhaps in some nottoo-far-off day, we may be able to select marine plants or animals which can do our mining for us.

But, she says, that won't be necessary in every case. If you could look along vast bottom areas of the ocean, you would see something that looks like this. We see on the ocean floor mock-ups of manganese nodules. No, says the teacher, there aren't burned potatoes. They are mysteriously-formed nodules containing manganese, iron, and small quantities of cobalt, nickel, and copper ...strewn along the ocean floor. There they are...just waiting to be scooped up...more mineral wealth than the human race has mined in all its history. How will they be scooped up? That remains to be seen. But one nodule collector, proposed by oceanographer John L. Mero, looks like this. We dissolve to a cut-out representation of the Mero nodule collector. Aside from the propellers, gyros, and floats to keep the pipe positioned in the deep, deep water...and the television cameras to find nodules...what does it remind you of? That's right. Our old friend...the useless vacuum cleaner.

Which is not so useless after all, is it?...asks the teacher, when the principles on which it operates are adapted to the specialized demands of this new environment. And the vacuum cleaner, changed up in another way, is being used also to harvest fish on fish farms.

Teacher says she would like to have a fish farm...IF it weren't for the "weeds" eating up all the food. Does that sound strange? Well, she says,

-4-

many things down here are strange...and they get even stranger when man starts adapting his dry land ideas to the ocean. You see, she explains, "weeds" to a fish farmer aren't plants. They're tiny, inedible creatures like this brittle star (SHE EXHIBITS A BRITTLE STAR OR FACSIMILE) and this starfish (SHE EXHIBITS A STARFISH OR FACSIMILE.) These, we are told, eat all but a tiny percentage of the fish food in the sea. You need a tractor all right, says the teacher, but explains that to clear these weeds, she'll probably have to trade hers in on a pressure-proof submarine.

Even then, points out the teacher, fish farming wouldn't be easy. How can we get our fish-crops to "stay put" and grow...instead of swimming away. She mentions fences with which scientists are experimenting, based on what is known about how fish react to color, noise, disturbed water. If these don't work, she says, she may have to give up aquaculture.

Of course, says the teacher, I might take up whale ranching. It is claimed that this could be a very profitable in the future, because, in addition to everything else she has of value, a mother whale gives a ton of milk a day.

Maybe she'd even teach me to breathe under water, says the teacher. She says she knows some scientists predict man will someday be able to have gills imposed by surgery. But she doesn't want gills. She'd rather get the whale to tell her the whale's breathing secret. Then, looking straight at the class, the teacher leaves a provocative question for the pupils' consideration. "What could that secret be?"

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UTILIZATION PROJECT

NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS under a grant-in-aid from UNITED STATES OFFICE OF EDUCATION.

FILM (SHOOTING SCRIPT)

KIT NO. 5 - UTILIZING TELEVISION IN THE ELEMENTARY CLASSROOM

(INTERMEDIATE SCIENCE LESSON - OCEANOGRAPHY)

(Utilization Oriented Primarily to One Discipline)

(Second Revision - May 12, 1964)

Film Director:

Writer:

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UTILIZING TELEVISION IN THE ELEMENTARY CLASSROOM

FADE IN

- ECU Objects in desk, thumbtacks, paperclips, etc., fingers come into frame and pick up thumbtacks.
- ECU Section of bulletin board Fingers come into frame with picture of ocean, thumbtack, hand thumbtacks picture to display "MOODS OF THE OCEAN" Slow pan to:
- INTERIOR. DAY. STUDIO. CU. High bulletin board No. 3. OCEAN PICTURES (in Ingerson Classroom). Establish, then SUPER TITLE: UTILIZING TELEVISION IN THE ELEMENTARY CLASSROOM. Dissolve to:
- 4. INTERIOR. DAY. STUDIO. CU. High bulletin board No. 4. OCEAN PICTURES CAMERA PULLS BACK to include high angle shot of full classroom. Pupils are at their desks. Teacher is calling attention to poster showing viewing skills.

Dissolve to:

- INTERIOR. DAY. CLASSROOM. LS. High angle shot of classroom. CAMERA MOVES IN to show pupils in one part of the classroom. Cut to:
- 6. INTERIOR. DAY. CLASSROOM. MS. ANOTHER ANGLE Cut to:

(MUSIC: FADE IN TO BG - LA MER DEBUSSY)

(MUSIC: FADE OUT UNDER)

<u>NARRATOR:</u> (VO) This is a learning environment.

NARRATOR: For nine months of one year it is the specialized habitat of these pupils...with their individual abilities... their particular interests... their specific needs... 7. INTERIOR. DAY. CLASSROOM MS. Teacher with poster.

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8.

<u>NARRATOR:</u> And of this teacher... who has her own personal values and special skills. An environment abounding in the materials from which lessons are made.

<u>MARRATOR</u>: A lesson may be forming here...

(CLASSROOM) CU. Textbook on table by boy's arm. Cut to:

INTERIOR. DAY. STUDIO.

Above and behind the teacher there are some teaching materials on a high shelf.

- 9. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Radio on shelf.
- 10. INTERIOR. DAY. STUDIO. (CIASSROOM) CU. Motion picture projector. Cut to:
- ll. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Art supplies. Cut to:
- 12. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Maps and globe. Cut to:
- 13. INTERIOR. DAY. STUDIO MS. Classroom. With TV set in foreground.

NARRATOR: Or here ...

<u>NARRATOR</u>: A lesson may be waiting here...

NARRATOR: Stirring here ...

NARRATOR: Emerging here ...

<u>NARRATOR</u>: (VO) For this classroom...rich in resources... counts among its blessings one of the latest...and, POTENTIALLY, one of the greatest...of these resources...Television. Teacher (in the background) looks at clock on wall, signals to a pupil, goes back to desk. Pupil leaves his place, goes to set, turns it on. Students are obviously getting set for the television lesson...adjusting chairs... sharpening pencils and getting note paper ready...checking vocabulary words on chalk board.

14. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Pupils watching screen. Cut to:

15. UNDERWATER SET MS. Teacher in classroom dress with dogfish cut-out on leash.

> She hooks leash over a sea plant and moves on to pressure cooker...sitting on rock formation. She picks up the pressure cooker. Cut to:

16. UNDERWATER SET. STUDIO. CU. Pressure cooker. (Teacher holds cooker in one hand ...lid in the other.) Cut to: NARRATOR: (CONTINUED)

Here television is used as a major resource in some subjects ...for enrichment in others. When the dial is turned, it summons into this classroom another member of the teaching team...one whose primary responsibility is the imaginative, well-documented, carefullyprepared presentation of subject matter.

Well...the time is now... the set is warm...the pupils are ready with materials at hand...

Every eye is on the screen ...

And the television teacher enters the classroom!

TV TEACHER: Where would you walk a dog like this?

TV TEACHER: Where would you use this for a bird cage?

- UNDERWATER SET. STUDIO. MS. Teacher puts down pressure cooker and moves to milk container...then moves on to tractor and sits on it. Cut to:
- 18. UNDERWATER SET. STUDIO. WIDE ANGLE. Cut to:
- 19. INTERIOR. DAY. STUDIO. (CLASSROOM) LS. Children facing screen.

CAMERA IS PULLING BACK as Narrator enters frame... blocking our view and (apparently) leading us out of earshot of the classroom.

He gestures toward the receiver. Cut to:

 INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Television set. Siderear view. TV TEACHER: Where would you find a baby who drinks a ton of milk a day?

TV TEACHER: Right here...in the depths of the briny, treacherous, beautiful, vast, and fertile ocean.

TV TEACHER (VO) How did I get here? I got here the same way YOU get lots of places YOU want to be...but can't go. By imagination! (FADING) And there is plenty of room for imagination in this strange new world of water....

NARRATOR: We may be giving you a false impression. Utilization of this television lesson involves more than turning on that receiver.

<u>NARRATOR</u>: Learning doesn't emerge with the simple click of a switch.

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21. INTERIOR. DAY. STUDIO. (CLASSROOM) (SAME AS END OF SCENE 19). Cut to:

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22. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Of Narrator w/o class in BG

FADE OUT:

FADE IN:

- CAMERA PULLS BACK from record turning to reveal teacher at table with record player on table. Teacher is watching pupils. Cut to:
- 24. INTERIOR. DAY. STUDIO. (CLASSROOM) MLS. Children listening to music. Cut to:

25. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher at table. As music stops, teacher reaches to shut off record player. Cut to: <u>NARRATOR:</u> Television can bring the child and the lesson together. But there it stops. The classroom teacher must apply the glue to make that lesson stick.

MARRATOR: Let's go back a few days to watch Mrs. Arnold, a skillful teacher, at work. Let's see how she used <u>music</u> to introduce a new science topic to her class.

TEACHER: All right, boys and girls. While the drift and lift of Debussy's music of the sea is still with us, tell me, if you will...just where did that music take you? Laura? 26. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Laura Cut to:

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- 27. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Teacher. Cut to:
- 28. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Bryan. Cut to:
- 29. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Scott
- 30. INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE. Teacher and a section of the class. Cut to:

31. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Laura. Cut to: LAURA: To the Gulf of Mexico.

TEACHER: Bryan?

BRYAN: To the sandy beaches of the Bahama Islands.

TEACHER: (VO) Scott? SCOTT: To the very bottom of the Marianas Trench.

<u>TEACHER</u>: David? How about you? <u>DAVID:</u> (VO) To the roaming

edge of the world.

TEACHER: That's an exciting phrase...though we don't know exactly where that is, do we? But I noticed that some of you mentioned some very specific places. Do you know these places from your own experience?

LAURA: I've been to the Gulf of Mexico

TEACHER: (VO) Good. How about the Bahama Islands? Bryan?

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32. INTERIOR. DAY. STUDIO. (CIASSROOM) CU. Bryan. Cut to:

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33. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Teacher Cut to:

- 34. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Alice Cut to:
- 35. INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE. Teacher and pupils.

- 36. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Scott. Cut to:
- 37. INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE. Teacher and pupils. Cut to:

BRYAN: My grandfather's been there, and he told me about 'em.

TEACHER: I see. And that's a good way to learn, isn't it, class? By listening when informed people talk.

ALICE: (VO) Mrs. Arnold.

TEACHER: Yes, Alice?

ALICE: I'll bet Scott hasn't been to the bottom of the Marianas Trench.

GENERAL LAUGHTER.

TEACHER: Only by music. But somebody has! Who was it, Scott? Do you know?

SCOTT: Walsh and Piccard. They went down in the Trieste. 35,780 feet. To the deepest known spot in the world.

<u>TEACHER</u>: And Scott has reminded us that we can explore and observe by reading the reports of reliable scientists. Is that

- 7 -

TEACHER (Continued) an accepted scientific way to add to our own experience?

PUPILS: Yes!

TEACHER: Indeed it is! Now how about some other ways?

- 38. INTERIOR. DAY. STUDIO (CLASSROOM) MS. Pupils with no reaction.
- 39. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher

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- 40. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Pupils react yes.
- 41. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher.
- 42. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Cut to:
- 43. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Laura Cut to:

TEACHER: Well, how about the music we heard?That adds to our experience, doesn't it?

<u>TEACHER</u>: Does it give us facts, David?

DAVID: (VO) No. Just feelings.

TEACHER: What else has given us feelings and impressions about the ocean?

LAURA: Oh, I know! The pictures we looked at. "The Big Wave", and that other one.
- 44. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Bryan. Cut to:
- 45. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Cut to:

 HTTERIOR. DAY. STUDIO. (CLASSROOM)
 MS. Two or three students, looking slightly puzzled. Cut to:

47. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Scott. Cut to:

48. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher BRYAN: That good one. By Winslow Homer. "Fog Warning." I liked that!

TEACHER: So did I, Bryan. It gave us a strong feeling about the sea, didn't it? Along with some information through our eyes. (PAUSE) Tell me something, boys and girls. Does how we feel ever affect what we know?

TEACHER: (VO) Let me put it this way. Can you think of a feeling that might make you want to know more about something? Scott?

<u>SCOTT</u>: Well, if I'm 'specially interested in something or excited about it...I want to know more.

TEACHER: That's very good thinking. Anybody else have any other ideas? Alice?

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49. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Alice. Cut to:

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50. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher Cut to:

51. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Devid. Cut to:

52. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Bryan.

 INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Over shoulder shot revealing a few students. Cut to: <u>ALICE</u>: If you feel like somebody's gonna get ahead of you...like the Russians or the French or the Chinese, or somebody...you want to know all you can.

TEACHER: That's right. A feeling of competition urges us toward knowing and learning, doesn't it? Yes, David?

<u>DAVID</u>: Well, how about just wanting to know something because you like to know things?

TEACHER: (VO) Yes! For some people the sheer joy of learning can give a big push toward knowledge, can't it, David? Do you have another feeling in mind, Bryan?

BRYAN: I thought maybe the feeling that it was brave and daring to find out about the unknown.

TEACHER: Yes! Excellent. The spirit of adventure. Now, all these feelings push us toward knowing, don't they? Can we think 54. INTERIOR. DAY. STUDIO. (CLASSROOM) Wide angle. Teacher and students. Teacher calls on students as they raise hands.

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55. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Alice. Holding up her hand. Cut to: TEACHER: (Continued)

of any feelings that might push

us away?

TEACHER: Scott?

SCOTT: Being afraid could do that.

TEACHER: It certainly could. Fear has kept lots of people from knowing lots of things. Laura?

<u>IAURA</u>: Or just feeling like... well, like a lot of people say sometimes: "It can't be done. There just isn't any way!"

TEACHER: Exactly. A feeling of helplessness. And we might even say "hopelessness" in the face of the unknown. Is there perhaps one more?

TEACHER: (VO) Yes, Alice?

<u>ALICE:</u> Well...what about feeling like you know it all? That there isn't anything left to find out? 56. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Teacher demonstrates her idea of the scale with her hands as she talks.

- 57. INMERIOR. DAY. STUDIO. (CLASSROOM) MS. Students. Looking blank. Cut to:
- INTERIOR. DAY. STUDIO. (CIASSROOM) Wide Angle. Teacher and Students

Teacher moves to globe. Turns it. Looks at it. Cut to: TEACHER: Or at least anything that's worth knowing. A very good point. So what do we have here, boys and girls? A kind of balance scale, don't we? On this side the feelings that push man toward knowing more than he knows. And on this side the feelings that push him away from knowing more. Now when these two forces...the forces FOR knowing... and the forces AGAINST knowing... are in balance...what happens?

TEACHER: (VO) (A TRIFLE OVER-PTAYED FOR A SHARED JOKE). That's right! NOTHING!

GENERAL LAUGHTER.

And until something happens to upset that equilibrium...to tip the scale toward knowing, "nothing" is what continues to happen! Now, let's store this in the back of our minds as we move into our new area of investigation in science ...new developments in oceanography.

TEACHER: (VO) Water...water... everywhere! Now, is there any good reason why we should devote our valuable investigation time and attention to the ocean?

TEACHER: (VO) Alice?

- 60. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Faces. Looking, thinking. Cut to:
- 61. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Alice, looking as if she is searching for the answer. Then she answers. Cut to:
- 62. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher Cut to:
- 63. INTERIOR. DAY. STUDIO. (CLASSROOM) Another angle. Teacher. Cut to:

64. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. David. Cut to: <u>ALICE</u>: Well, it's part of our environment.

TEACHER: Yes, as a part of earth, the ocean is an area of great influence in our environment, isn't it? Now, we've talked a great deal in these past months about man's relationship to his environment, haven't we? And what...in this relationship... did we decide had contributed much to the new developments in science. David?

<u>DAVID</u>: Man's constant striving to learn about his environment and to control it. 65. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Scott.

66. INTERIOR. DAY. STUDIO. (CLASSROOM) MS: Teacher Cut to:

- 67. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Laura Cut to:
- INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE: Teacher and Pupils.

TEACHER: (VO) Um-hm. And does oceanography have a place in this changing picture? Scott?

SCOTT: Yes, ma'am! It's one of the newest and most active of all the science areas. Why, man has learned more about the ocean in the last twenty years than he's ever known before in all history!

TEACHER: That's wonderful, isn't it? But it's also rather puzzling. (VERY MOCK SERIOUS) Unless, of course, the <u>ocean</u> is new. Is it? Laura?

(CHILDREN LAUGH)

LAURA: (GIGGLES) No, ma'am. It's millions...maybe even billions of years old.

TEACHER: Well, then...we've got a problem, haven't we? Or maybe a couple of problems. Why has man waited all these centuries to explore the ocean depths? And why...now...has he so actively begun? Would we like to find out? 69. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Faces of children Pan shot

70. INTERIOR. DAY. STUDIO. (LIBRARY) MS. Boy consulting with school librarian, checking out book. Cut or dissolve to:

 INTERIOR. EVENING. HOME LIVING ROOM. MS. Girl looking over books on shelf, selects one, sits in chair to read. Cut or Dissolve to:

72. INTERIOR. EVENING. BOY'S BEDROOM CU. (OVER SHOULDER) Boy making list of questions. Cut or Dissolve to: TEACHER: Good! Let's talk about this again tomorrow. From what we know now and the facts we shall have gathered by then...we ought to be able to hazard one or two pretty good guesses. Now, tonight, boys and girls...

<u>NARRATOR</u>: (VO) To borrow a phrase from oceanography...Mrs. Arnold is taking soundings of knowledge and interest in her classroom. As she probes with picture study, with music, with discussion...

<u>NARRATOR:</u> (VO) With self-directed reading from the school library...

<u>NARRETOR:</u> (VO) Or from the books at home...

NARRATOR: (VO) With lists of questions made by the pupils... to be considered by the class...

- 73. INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE. Teacher at blackboard. Pupils in foreground. Vocabulary written on blackboard. Cut or Dissolve to:
- 74. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Classroom and faces.

75. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Narrator.

76. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Class with TV set in foreground. <u>NARRATOR:</u> (VO) With vocabulary drill on words her pupils need to know...

<u>NARRATOR</u>: (VO) She is searching out the peaks and valleys...the low-level arid stretches of nonawareness...which must be stirred up for future growth.

The next day Mrs. Arnold led her pupils further into the preparation which would make their television lesson more meaningful. Working in harmonious tandem with the television teacher...toward shared goals clearky stated in the Teacher's Guide...she explored with them the anticipated "what" of the lesson content...while broadening their vision toward the "how's" and "why's" of a larger concept about man's learning and, thus, of course, their own.

NARRATOR: (VO) I think now we are better prepared to rejoin Mrs Arnold and her class for the latter portion of the television lesson. 77. UNDERWATER SET MS. Teacher on tractor. Cut to:

- 78. UNDERWATER SET. MS. Teacher on tractor. NEW ANGLE
- 79. CU. Teacher.
- 80. UNDERWATER SET. MS. Saucer. Pull back to:

- 81. UNDERWATER SET. IS. Teacher on tractor. She leaves the tractor and moves to right foreground...as CAMERA PULLS EACK to reveal superstructure of ocean floor drilling rig...with TV lights and camera...and lines extending to the ship floating above. Cut to:
- UNDERWATER SET. CU. Superstructure of drilling rig. Teacher indicates lines and pipe reaching to the surface.

TEACHER: And now that scientists have solved some of our problems of survival in the ocean...we re ready to explore some of the "practical promises" of the sea.

TEACHER: As a result, the ocean is a very busy place. New discoveries being made every day! New people coming and going!

TEACHER: Some of the underwater vessels are always on the go... taking scientists and other guests on tours of exploration and observation.

TEACHER: One of the most exciting things down here is the drilling method developed to get at the ocean's enormous oil reserves.

TEACHER: You see...here's the drill working away right here... hundreds of feet down...and from up there...hundreds of feet up... the whole operation is being performed from an anchored ship by remote control. drilling? Not divers. It's much too deep for them. No. The people on the ship do all that. How?

> <u>TEACHER:</u> Underwater TV cameras keep an eye on the drilling while the drillers sit comfortably on ship and watch just as you're doing.

TEACHER: (Continued)

Who keeps watch and does the

TEACHER: It all looks pretty simple from here now, doesn't it? But the problems were overwhelming for a while. What do you suppose some of them were? How do you suppose they were solved?

TEACHER: Now, oil isn't the only source of wealth under the ocean. Already the ocean is wellrepresented in the sky...in magnesium from which most of our planes are built.

TEACHER: One of these years we may hear about a gold rush under the waves. Right now the

83. UNDERWATER SET. CU. TV camera on drilling rig. Cut to:

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84. UNDERWATER SET. MS. Oil drilling rig. Cut to:

85. UNDERWATER SET. WIDE ANCLE. Teacher moves over to big rock at left of screen. Leans against the rock.

86. UNDERWATER SET. DIFFERENT ANGLE. Teacher.

- 19 -

Teacher reaches down, picks up lobster.

87. UNDERWATER SET. CU. Lobster held by teacher. Cut to:

 UNDERWATER SET Ocean floor. MS. Teacher with lobster.

She puts lobster on a rock.

Teacher moves to nodule collector.

- UNDERWATER SET. MS. Teacher with Manganese nodules. She picks up some of them.
- 90. UNDERWATER SET CU. Manganese Nodule.

TEACHER: (Continued) recovery of gold from this enormous amount of water seems hopeless. But we may someday have some help from the ocean itself.

TEACHER: For instance, cobalt is even scarcer than gold...but this clever fellow...the lobster ...manages to extract it from the water.

TEACHER: Perhaps...someday... we'll simply select marine plants and animals to do our mining for us.

Or maybe we won't need to bother with such trivial wealth. If you could look along vast bottom areas of the ocean... you would see something that looks like this.

TEACHER: No. These aren't burned potatoes. They're lumps of wealth beyond belief... mysteriously-formed nodules of minerals...10 million dollars worth to the square mile.

TEACHER (Continued) All along the ocean floor they lie...these blackish bumps of treasure...just waiting to be scooped up...more mineral wealth, it's said, than the human race has mined in all its history. How will they be scooped up?

TEACHER: Perhaps by a nodule collector like this...proposed by Oceanographer John L. Mero. Only time will tell. But meanwhile, let's take a good look at this fabulous gadget. Without the propellers, gyros, and floats to keep the pipe positioned in the ocean depths...and the television cameras to spot nodules...it looks very much like something we already know.

TEACHER: That's right, a vacuum cleaner.

TEACHER: ... when the principles on which a vacuum cleaner operates are adapted to the specialized demands of this new environment.

91. UNDERWATER SET. ART WORK. Nodule Collector Dissolve to:

- 92. UNDERWATER SET. MCU. Vacuum cheaner. Dissolve to:
- 93. UNDERWATER SET. MS. Teacher.

Teacher gestures to the suction pump fishing apparatus in the left foreground as CAMERA PULLS BACK to reveal it.

 UNDERWATER SET. STUDIO. CAMERA PULLS OUT as teacher walks into frame and sits or leans on tractor. Cut to:

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- 95. UNDERWATER SET.. STUDIO. CU. Brittle Star. Cut to:
- 96. UNDERWATER SET. STUDIO. CU. Starfish. Cut to:
- 97. UNDERWATER SET. STUDIO. CU. Teacher. Cut to:

TEACHER: (Continued) It can be used in another way... to harvest fish on a fish farm.

TEACHER:

I'd like to have a fish farm. IF it weren't for the "weeds" eating up all the food. Does that sound strange? Well, many things down here are strange...and they get even stranger when man starts adapting his dry land ideas to the ocean. You see, "weeds" to a fish farmer aren't plants. They're tiny inedible creatures...

TEACHER: Like this brittle star ...

TEACHER: And this star fish ...

<u>TEACHER</u>: Which, we are told, eat up all but a tiny percentage of the fish food in the sea. You need a tractor, all right, but to clear <u>these</u> weeds, I'll probably have to trade mine in on a pressure-proof submarine model. 98. UNDERWATER SET. STUDIO. MS. Teacher. Cut to:

99. UNDERWATER SET. STUDIO. NEW ANGLE. Teacher. Cut to:

100. UNDERWATER SET. ART WORT CLOWE TO CAMERA. A baby whale slowly crosses the screen... followed by the mother whale...

> As the whale's head gets almost across the screen, it winks its eye.

TEACHER: Even then, you know, fish farming wouldn't be easy. How can we get our fish-crops to "stay put" and grow...instead of swimming away? The answer, I understand from those who are experimenting in the field, is to fence them in...using what is known about how fish react to color, noise, and disturbed water.

TEACHER: If this doesn't work, I'll probably have to give up aquaculture. Of course, I might take up whale ranching.

TEACHER: (VO) They say that could be very profitable in the future. Because in addition to everything else she has of value, the mother whale gives a ton of milk a day!

Maybe she'd even teach me to breache under water. I know scientists predict someday man can have gills imposed by surgery. But I don't think I want gills.

<u>TEACHER</u>: (Continued) Whales don't need them. I'd rather just get the whale to tell me her breathing secret.

(DIRECTLY TO CAMERA...CONTEMPLA-TIVELY)

What could it be?

Whale moves on to wipe screen. Fade out.

LESSON SEGMENT ENDS

101. Fade in: INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Narrator. (Class and teacher in far EG).

MARRATOR: The television lesson is over. What do you as a classroom teacher do now? The answers will be found in the objectives of the television lesson...in the goals for which you and the television teacher share a mutual responsibility. It will help you more perhaps to ask yourself these direct and specific things. "What do we want to happen from this lesson and from what my class and I do with it? What behavior do we want to result?

"What are the best ways to bring about such behavior...taking into account these children as

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102. INTERIOR. DAY. STUDIO. ANOTHER ANGLE. Narrator.

103. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. The word "oceans" being written on the blackboard, by Mrs. Arnold. (This is the last word in No. 4 of "Main Ideas,") The "Main Ideas" are listed on the blackboard ... and around them are words, phrases, random statements, singly or in groups, marked through, joined by brackets or transitions to lines between "balloons," etc...all this indicating efforts of Mrs. Arnold and class to coalesce and structure random thoughts and impressions from the television lesson. (SEE PAGE SHOWING BLACKBOARD CONTENTS.)

<u>NARRATOR</u>: (Continued) pupils and people...myself as a teacher and person...the nature of this lesson...and the conditions of our learning situation?"

<u>MARRATOR</u>: Your immediate and short-range responsibility is to give the lesson its due. "Revisiting" the lesson with your class will help to reinforce its ideas, make its structure clear, highlight its spirit and appeal, straighten out misunderstandings.

Let's look in on Mrs. Arnold and her class as they revisit their television lesson about oceans. 104. CAMERA ON BLACKBOARD and continues to explore contents of blackboard as teacher is heard off screen.

Pull back to see teacher.

105. MS. Teacher and class

The teacher moves to an easel near the blackboard to display a poster with the questions:

"WHY HAS MAN WAITED SO LONG TO EXPLORE THE OCEAN DEPTHS?"

"WHY NOW HAS HE SO ACTIVELY BEGUN?"

106. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Poster bearing questions

> CAMERA in tight on first question. Cut to:

107. INTERIOR. DAY. STUDIO. (CLASSROOM) (Shot continued next page) TEACHER: All right, class. We've talked about the main ideas in the lesson. We've explored briefly how the lesson as a whole made us feel. We've listed some of the surprises we found in it. Now as we check the lesson to see which of our questions were answered... and which ones we will need to explore further...let's remember the two big questions that started us on our investigation.

TEACHER: (VO) Laura...will you read the first question!

LAURA: (VO) Why has man waited so long to explore the ocean depths?

TEACHER: (VO) Now, the second one...David...please.

CU: Poster bearing questions. CAMERA PANS DOWN to second question. Cut to:

108. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. The word "WHY?" on blackboard. Teacher writing. CAMERA pulls back to reveal teacher writing also:

> Knew -Felt - HYPOTHESIS Saw -Read - Guess

> > "We think probably -- "

Observe - Explore -Experiment

CAMERA moves in to tight shot of teacher's hands demonstrating scale. Lap dissolve to:

109. INTERIOR. DAY. STUDIO. (CLASSROOM) Balance Scale (constructed by DAVID: (VO) Why...now...has he so actively begun?

TEACHER: Yesterday, boys and girls, out of everything we knew, had read, had seen, had felt ... we built ourselves a guess ... a hypothesis...a "we think probably" answer to these two important why's. Now, we're ready to check our guess against the facts as we find them in our television lesson ... and elsewhere. We were saying, weren't we, that when the forces FOR knowing and the forces AGAINST knowing are in balance ... man's learning stops. That meant, we decided, that scientific exploration stops. And we guessed that THAT was what had happened about the ocean. But we said further that something had tipped the scales toward knowing ... and that there were two ways this could happen.

BRYAN: (VO) (VOICE OVERLAPS TEACHERS) ... two ways this could

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110. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. BRYAN with scales and book exhibit. As Bryan speaks, CAMERA EXPLORES this exhibit, which bears the slogan: WHAT TIPPED THE SCALES?

CAMERA PULLS BACK AND PANS LEFT TO:

ALICE...on other side of scales exhibit.

Alice picks up a large paper ball labeled NEED.

She shows inside this large ball smaller balls labeled: Population explosion Depletion of land resources Defense BRYAN: (Continued)

happen. Either some feeling TOWARD knowing had been ADDED TO this side...making it heavier. Or some feeling AGAINST knowing had been TAKEN FROM this side...making it lighter.

We asked ourselves what these things could have been...to bring on all the activity about the ocean. And to tell you what we guessed...here is another member of our committee...Alice Black...

<u>ALICE</u>: Well, we guessed that the feeling which had been added to the TOWARD knowing side of the scale was man's feeling of NEED... need for food...wealth...and security...brought on by the population explosion...the depletion of our resources on land...and danger of military attack. But some feelings had also been removed from the AGAINST knowing side of the scale Alice demonstrates as she talks...lifting the colored paper balls cued to the narration...removing them from the scale.

CAMERA MOVES IN ON BOOKS connected with exhibit.

Fade out.

Fade in.

111. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Narrator, with class in background. Cut to: ALICE (Continued)

making it lighter. Fear and helplessness had been removed by new inventions which helped man to operate more successfully in the ocean depths. The aqualung, for instance. And the underwater deepdiving and exploration vessels. And hopelessness had been removed by new encouraging discoveries.

Now...to tell you how our Scales Exhibit Committee worked with the Library Committee...here (FADING) is another member....

<u>MARRATOR</u>: Because her pupils are with her all day...and because time, space, and scheduling are more flexible in the elementary classroom situation, Mrs. Arnold is able to explore <u>some</u> subject areas in considerable depth, where she feels this is in the best interests of her class. As interest in this new science area was widespread and enthusiasm was high,

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112. INTERIOR. DAY. STUDIO. (CIASSROOM) MS. Bryan...standing by scales exhibit. Angle shot to include member of Library Committee, who is finishing her report.

CAMERA PANS TO AND MOVES IN TIGHT ON SCALES.

CAMERA PULLS BACK to open scene enough to include Bryan and girl who has just finished her report. Cut to:

113. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Alice at her desk.

114. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Scott at table... working on poster: SCIENCES IN THE SEA <u>NARRATOR:</u> (Continued) she took this opportunity to use her pupils' own special abilities to their fullest extent.

TEACHER: (VO) Bryan works best with other children. His hands lead his mind...and we can depend upon him to demonstrate concretely ...with artistic visuals... like the scales here...

the abstract concepts toward which other children sometimes move more quickly...taking Bryan with them.

TEACHER: (VO) Alice is our saddle burr...doubter...realist...sometime scoffer. We want to preserve her critical qualities...her "nose" for fallacies among the facts... while directing her reactions into more thoughtful and constructive channels.

TEACHER: (VO) Scott is <u>our</u> vacuum cleaner...adapted to garnering information. He scoops up facts like a suction pipe harvesting fish. 115. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. (OVER SHOULDER) Poster: SCIENCES IN THE SEA Cut to:

- 116. INTERIOR. DAY. STUDIO. CU. Mobile. David's hands attaching to a hanging element that says "Briny" another hanging element. CAMERA pulls back as David reaches for another hanging element. Cut to:
- 117. INTERIOR. DAY. STUDIO. CU. Mobile element which says "Deep." Elements nearby contain information on depth of ocean...Marianas Trench...Continental Shelf.
- 118. INTERIOR. DAY. STUDIO. MS. David checking next step in mobile. Cut to:

poster and the notebook he is preparing to go with it will provide a comprehensive resource for the other pupils...impressing upon the maker and the users the whole complex of sciences repre-

sented in Oceanography.

TEACHER: (VO) In his hands, this

TEACHER: (VO) For David, words are the Pied Pipers enticing him into a consideration of "how's" ... "why's"...and "what's". His "Cliche Mobile" makes David and all of us take a new look at the tired and pallid generalities we have mouthed so long about the vivid, vigorous, forever old, forever new ocean.

DAVID: (TO HIMSELF...ENUMERATING ELEMENTS AND STRUCTURE AS HE CHECKS) Let's see. "Briny." "How briny?" "Recovery of salt." Recovery of fresh water." Old methods...new methods.

119. INTERIOR. DAY. STUDIO. IS. Classroom door. Door opens. Laura enters...followed by custodian carrying heavy bronze statue, a drape of velvet, a painting. Cut to:

- 120. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Laura directing custodian to table across the classroom. Cut to:
- 121. INTERIOR. DAY. STUDIO. (CLASSROOM) MLS. Custodian and Laura arriving at table. He deposits his load and exits. Laura arranges drape over statue. CAMERA PANS DOWN as she leans to prop painting on floor against front of table. PANS UP as she straightens. Cut to:
- 122. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Laura. She is arranging some smaller art objects...a small vase...a small pot...a decorated box...some costume jewelry...on the drape. CAMERA IN TIGHT on table slogan which reads: DEEP OCEAN ART GALLERY. Treasures from Sunken Ships. Dissolve to:

123. INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE. One section of classroom only. "Career Day" tables set up in classroom. GROCERY STORE, with specialty foods from the sea. PHARMACY with iodine and antibiotics, etc. MEN'S CLOTHING STORE, with diving gear. CAMERA EXPLORES these tables, ending at table TEACHER: (VO) Laura...the eternal feminine...who could coax a lobster out of his shell!

TEACHER: Iaura vibrates to the present and the pleasant. The things she can see, hold, touch, smell...especially if it has a hint of the theater about it.

TEACHER: Laura's older brother is the idol of her life. Small wonder that when Career Day at his high school happened to follow our television lesson, Laura decided we must have a Career Day of our own...in the ocean's depths. And only Laura could have wheedled, smiled, and pouted the rest of the class along in the wake of her project "inspiration."

TEACHER (VO) This is a bit fancier than our activities usually get. But the ocean for these landlocked children was a wonderfully stimulating place. For me, their teacher, it presented an

TEACHER: (Continued) unusual opportunity to move them toward insights into man's motivations, his visionary and practical natures, his driving urge to impose his human stamp upon the world around him...to move them toward open-mindedness leavened with critical judgment... and responsible behavior.

(MUSIC: LA MER - DEBUSSY - FADE INTO BG.)

CAMERA BEGINS TO PULL BACK AND UP FOR ELEVATED ANGLE SHOT.

.

JIM: (AT TABLE...TALKING TO "VISITORS") Yes, we handle very important and difficult problems. Like who owns the ocean floor. We also advise with people who are thinking about changing ocean currents or moving fishing grounds or hauling icebergs. Even small changes in the movement or content or ocean waters, you know, (FADING) can have some very drastic and maybe terrible results. CAMERA EXPLORES THE BUSY CLASSROOM...coming in on portion of classroom where television receiver can be seen. Not in close-up central emphasis here, but as an integral part of the classroom picture. Camera moves to faces of children. Cut to:

124. INTERIOR. DAY. STUDIO. UNDERWATER SCENE. Recap of portion of TV lesson. Full Screen. (No sound)

> Camera moves in on Ocean Depths. Dissolve to:

<u>MARRATOR:</u> (VO) This is a learning environment. It abounds in the resources from which lessons are made. Among these resources is television.

TEACHER: (VO) A resource which, in my experience as a classroom teacher, adds...to our classroom ...dimensions we could attain in no other way.

TEACHER: (VO) Here at my finger tips is the invaluable help of a trained and talented colleague who offers sound, carefully-planned learning materials of scope. impact, and immediacy. And ... which is highly important...these are materials geared to our needs ... directed toward educational goals I accept and value. In the learning experience you have just shared, television made accessible to my pupils and me materials too recent to be available in our textbooks...presented in a way we cannot duplicate in the classroom ... yet oriented to

125. INTER.. DAY. STUDIO. (CLASSROOM) High bulletin board of ocean scene. Camera pans to bulletin board bearing legend: "The possibilities of science do not lie on the earth or in outer space or down under the ocean. They are inside human beings." TEACHER: (Continued)

the best of classroom procedures. Do you wonder that I, as a classroom teacher who wants more for her pupils than any single teacher, working alone, can ever provide...do you wonder that I consider television at its best a valuable classroom asset?

CAMERA PANS across bulletin

boards as in opening sequence

to reveal closing credits.

UTILIZATION PROJECT

NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS under a grant-in-aid from UNITED STATES OFFICE OF EDUCATION.

FILM (SHOOTING SCRIPT)

KIT NO. 5 - UTILIZING TELEVISION IN THE ELEMENTARY CLASSROOM (INTERMEDIATE SCIENCE LESSON - OCEANOGRAPHY) (Utilization Oriented Primarily to One Discipline) (Third Revision - June 2, 1964) With Chauges J. June 2.

Film Director:

Earl Miller Film Unit - Radio/Television The University of Texas Austin, Texas Writer:

Marye D. Benjamin KLRN-TV Southwest Texas Educational Television Council Austin, Texas

UTILIZING TELEVISION IN THE ELEMENTARY CLASSROOM

FADE IN

- SC. 1. ECU - Objects in desk, thumbtacks, paperclips, etc. Fingers come into frame and pick up thumbtacks.
- SC. 2. ECU Section of bulletin board. Fingers come into frame with picture of ocean. thumbtack. Hand thumbtacks picture to display: "Moods of the Ocean".

Camera pulls back - we see many pictures on bulletin board...Hold on Pictures for 3 ft. Start dolly again - Pull back past Narrator to see entire class - including TV set -Narrator is looking at class Turns to camera.....

Narrator walks to his place (OFF SET) Camera pans with him -- Dolly in for fairly close shot -- Camera stops ...

Narrator turns in direction of class

SC. 3. INTERIOR. DAY. CLASSROOM MS Teacher with poster (START BACKGROUND SOUND OF CLASS)

SOUND:

FADE IN . NATURAL BACK-GROUND SOUND OF CLASS ACTIVITY.

(ON CAMERA) This is MARRATOR :

a learning environment. Witt

NARRATOR: For nine months of one year it is the specialized habitat of these pupils ... with their individual abilities...their particular interests... their specific needs

(VO) And of this tea-NARRATOR: cher, who has her own personal values and special skills, An environment abounding in the materials from which lessons are made.

- SC. 4. INTERIOR. DAY. STUDIO CLASSROOM. CU. Textbook on table by boy's arm.
- SC. 5. INTERIOR. DAY. CLASSROOM SET CU PHONOGRAPH
- SC. 6. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Motion picture projector. Cut to:
- SC. 7. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Art supplies. Cut to:
- SC. 8. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Maps and globe. Cut to:
- SC. 9. INTERIOR. DAY. STUDIO MS. Classroom. With TV set in foreground.

SC. 10. INTERIOR. DAY. CLASSROOM SET MS Teacher looks at clock on wall,... Students are obviously getting set for the television lesson... adjusting chairs, etc...

SC. 11. CU Narrator looks from class to camera (SYNC)

<u>marrator</u>: (VO) A lesson may be forming here...

NARRATOR: (VO) Or here ...

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NARRATOR: A lesson may be waiting here...

Narrator: Stirring here ...

NARRATOR: Emerging here

<u>NARRATOR:</u> (VO) And a lesson certainly will be coming to life here. For this classroom...rich in resources...counts among its blessings one of the latest... and, POTENTIALLY, one of the greatest...of these resources... television.

<u>NARRATOR:</u> (VO) Here television is used as a major resource in some subjects...for enrichment in others...

NARRATOR: (OS) WHen the dial is turned, it summons into this classroom another member of the teaching team...one whose primary SC. 11. (CONT'D)

NARRATOR: CONT'D

responsibility is the imaginative, well-documented, carefully-prepared presentation of subject matter...

Narrator turns toward class

- SC. 12. INTERIOR CLASSROOM SET MS GROUP of pupils watching TV
- SC. 13. CU: (MATTE SHOT) TV SCREEN with TITLE on screen. "NEW NOTIONS ABOUT OCEANS"
- SC. 14. UNDER WATER SET. (MATTE SHOT) (SYNC) MLS. Television Teacher

She gestures toward baby whale cut-out.

SC. 15. UNDERWATER SET (MATTE SHOT) (SYNC) CU. Baby whale cut-out

SC. 16. UNDERWATER SET. (MATTE SHOT) (SYNC) CU. TV Teacher.

SC. 17. INTERIOR. CLASSROOM SET. (SYNC). MS. Children watching TV. CONT^oD Well...the time is now

<u>NARRATOR:</u> (VO) Every eye is on the screen...

<u>NARRATOR</u>: (VO) And the television teacher enters the classroom;

<u>TV TEACHER:</u> (OS) I just saw a baby who drinks a ton of milk a day! Where?

<u>TV TEACHER:</u> (VO) Right here...in the depths of the briny, treacherous, beautiful, vast, and fertile ocean.

<u>TV TEACHER:</u> (OS) How did <u>I</u> get here? I got here the same way YOU get lots of places YOU want to be...By imagination!

TV TEACHER CONTINUES: (VO) And there is plenty of room for

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SC. 17. Continued: CAMERA starts
 to pull back...pas+
 NARR^TOR who is watching
 class. As we pass NARRATOR,
 he turns to camera.

Narrator walks to his spot... Camera pans with him...He turns to camera (SYNC) (SOUND OF CLASS AND TV LESSON FADES AS NARRATOR GETS OFF SET)

Note: Tv teacher can continue talking about pressure cooker etc.... Narrator gestures toward class.

SC. 18. ECU: NARRATOR (HEAD SHOT -SYNC)

DISSOLVE ON WORD - MUSIC

SC. 19. INTERIOR. CLASSROOM SET (ANOTHER DAY) CLOTHES CHANGE FOR EVERYONE BUT NARRATOR ECU: Debussy record spinning.. needle should be on about the last 20 seconds of recording...

- SC. 20. 2 shot Boy and girl listening to record
- SC. 21. CU Boy listening
- SC. 22. CU Girl listening

SC. 23. CU Another boy listening

TV TEACHER CONT'D

imagination in this strange new
world of water...etc.

<u>NARRATOR</u> (OS) We <u>may</u> be giving you a false impression. Utilization of this television lesson involves more than turning on that receiver. Learning doesn't emerge with the simple click of a switch....Television can bring the child and the lesson together. But there it stops. The classroom teacher must apply the glue to make that lesson stick.

NARRATOR: (OS) Let's go back a few days to watch Mrs. Arnold, a skillful teacher, at work. Let's see how she used <u>music</u> to introduce a new science topic to her class.

NOTE: SOUND OF RECORD DISSOLVES IN TO BACKGROUND LEVEL UNTIL NARRATOR FINISHES LINE....THEN UP TO FULL LEVEL....

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- SC. 24. MLS Children listening to music
- SC. 25. MS Teacher at table. As music stops, teacher reaches to shut off record player.
- NOTE: SHOOT EACH PERSON BEING ASKED A QUESTION AND THE SAME PERSON GIVING THE ANSWER....SHOOT THE SAME PERSON ASKING THE QUESTION AND LISTENING TO THE ANSWER....
- SC. 26. INTERIOR. DAY. STUDIO (CLASSROOM) CU. Laura Cut to:
- SC. 27. INTERIOR. DAY. STUDIO (CLASSROOM) CU. Teacher. Cut to:
- SC. 28. INTERIOR. DAY. STUDIO (CLASSROOM) CU. Bryan. Cut to:
- SC. 29. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Scott
- SC. 30. INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE. Teacher and a section of the class. Cut to:

TEACHER: All right, boys and girls. While the mood of Debussy's music of the sea is still with us, tell me, just were did that music take you?

LAURA: To the Gulf of Mexico.

TEACHER: Bryan?

BRYAN: To the sandy beaches of the Bahama Islands.

<u>TEACHER</u>: (VO) Scott? <u>SCOTT</u>: To the very bottom of the Marianas Trench.

TEACHER: David? How about you? DAVID: (VO) To the roaming edge of the world.

TEACHER: That's an exciting phrase...though we don't know exactly where that is, do we? But I noticed that some of you mentioned some very specific places.

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SC. 30. CONT'D

SC. 31. TNTERIOR. DAY. STUDIO. (CLASSROOM) CU. Laura. Cut to:

SC. 32. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Bryan. Cut to.

SC. 33. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Teacher Cut to:

SC. 34. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Alice Cut to:

- SC. 35. INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE. Teacher and pupils.
- SC. 36. INTERIOR. DAY. STUDIO (CLASSROOM) MS. Scott. Cut to:

TEACHER: CONT'D Do you know these places from your own experience?

LAURA: I've been to the Gulf of Mexico.

TEACHER: (VO) Good. How about the Bahama Islands? Bryan?

BRYAN: My grandfather's been there, and he told me about 'em.

TEACHER: I see. And that's a good way to learn, isn't it, class? By listening when informed people talk.

Alice: (VO) Mrs. Arnold.

TEACHER: Yes, Alice?

ALICE: I'll bet Scott hasn't been to the bottom of the Marianas Trench.

GENERAL LAUGHTER.

TEACHER: Only by music. But somebody has! Who was it, Scott? Do you know?

SCOTT: Walsh and Piccard. They went down in the Trieste.

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SC. 36. CONT'D

SC. 37. INTERIOR, DAY, STUDIO. (CLASSROOM) WIDE ANGLE, Teacher and pupils. Cut to:

SCOTT: CONT'D 35,780 feet. To the deepest known spot in the world.

TEACHER: And Scott has reminded us that we can explore and observe by reading the reports of reliable scientists. Is that an accepted scientific way to add to our own experience?

PUPILS: Yes!

it?

TEACHER: Indeed it is! Now, how about some other ways?

Sc. 38. INTERIOR. DAY. STUDIO (CLASSROOM) MS. Pupils with no reaction.

TEACHER: How about the music SC. 39. INTERIOR. DAY. STUDIO. (CLASSROOM) we heard, for instance? That MS. Teacher

SC. 40. INTERIOR, DAY, STUDIO (CLASSROOM) MS. Pupils react yes

TEACHER: But it doesn't give INTERIOR, DAY, STUDIO, SC. 41. (CLASSROOM) us facts, does it? David? MS. Teacher

SC. 42. INTERIOR. DAY. STUDIO. (CLASSROOM) CONT ° D

adds to our experience, doesn't

DAVID: (VO) No, Ma'am. Just... well. I guess you'd say"feelings".

TEACHER: Yes. And what else has given us feelings and impressions

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- SC. 42. CONT'D MS. Teacher Cut to:
- SC. 43. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Laura Cut to:

TEACHER (Cont'd) about the ocean?

LAURA: Oh, I know! The pictures we looked at. "The Big Wave", and that other one.

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- SC. 44. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Bryan. Cut to:
- SC. 45. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Cut to:

SC. 46. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Two or three students, looking slightly puzzled. Cut to:

SC. 47. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Scott. Cut to:

- SC. 48. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher.
- SC. 49. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. Alice. Cut to:

<u>BRYAN:</u> That good one. By Winslow Homer. "Fog Warning." I liked that!

<u>TEACHER:</u> So did I, Bryan. It gave us a strong feeling about the sea, didn't it? Along with some information through our eyes. (PAUSE) Tell me something, boys and girls. Does how we feel ever affect what we know?

<u>TEACHER:</u> (VO) Let me put it this way. Can you think of a feeling that might make you want to know more about something? Scott?

<u>SCOTT:</u> Well, if I'm 'specially interested in something or excited about it...I want to know more.

TEACHER: That's very good thinking. Anybody else have any other ideas? Alice?

<u>ALICE:</u> If you feel like somebody's gonna get ahead of you...like the Russians or the French or the Chinese, or somebody...you want to know all you can.

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- SC. 50. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Cut to:
- SC. 51. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. David. Cut to:

SC. 52. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Bryan.

SC. 53. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Over shoulder shot revealing a few students. Cut to:

SC. 54. INTERIOR. DAY. STUDIO. (CLASSROOM) Wide angle. Teacher and students, Teacher calls on students as they raise hands. TEACHER: That's right. A feeling of competition urges us toward knowing and learning, doesn't it? Yes, David?

<u>DAVID:</u> Well, how about just wanting to know something because you like to know things?

<u>TEACHER:</u> (VO) Yes! For some people the sheer joy of learning can give a big push toward knowledge can't it, David? Do you have anothe feeling in mind, Bryan?

<u>BRYAN:</u> I thought maybe the feeling that it was brave and daring to find out about the unknown.

TEACHER: Yes! Excellent. The spirit of adventure. Now, all these feelings push us toward knowing, don't they? Can we think of any feelings that might push us away?

TEACHER: Scott?

SCOTT: Being afraid could do that.

TEACHER: It certainly could. Fear has kept lots of people from knowing lots of things. Laura?

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LAURA: Or just feeling like... well, like a lot of people say sometimes: "It can't be done. There just isn't any way!"

TEACHER: Exactly. A feeling of helplessness. And we might even say "hopelessness" in the face of the unknown. Is there perhaps one more?

SC. 55. INTERIOR. DAY. STUDIO, (CLASSROOM) MS. Alice. Holding up her hand. Cut to:

SC. 56. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Teacher demonstrates her idea of the scale with her hands as she talks. TEACHER: (VO) Yes, Alice?

ALICE: Well...what about feeling like you know it all? That there isn't anything left to find out?

TEACHER: Or at least anything that's worth knowing. A very good point. So what do we have here, boys and girls? A kind of balance scale, don't we? On this side the feelings that push man toward knowing more than he knows. And on this side the feelings that push him away from knowing more. Now when these two forces...the forces FOR knowing...and the forces AGAINST knowing...are in balance... what happens?

- SC. 57. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Students. Looking blank. Cut to:
- SC. 58. INTERIOR. DAY. STUDIO. (CLASSROOM) Wide Angle. Teacher and Students.

Teacher moves to globe. Turns it. Looks at it. Cut to:

SC. 59. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Globe. Cut to:

TEACHER: (VO) (A TRIFLE OVER-PLAYED FOR A SHARED IOKE). That's right! NOTHING!

GENERAL LAUGHTER.

TEACHER: And until something happens to upset that equilibrium ... to tip the scale toward knowing, "nothing" is what continues to happen! Let's store this in the back of our minds as we move into our new area of investigation in science ... new developments in oceanography.

TEACHER: (VO) Water...water... everywhere! Now, is there any good reason why we should devote our valuable investigation time and attention to the ocean?

- SC. 60. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Faces. Looking, thinking. Cut to:
- SC. 61. INTERIOR. DAY. STUDIO. ALICE: Well, it's part of our (CLASSROOM) MS. Alice, looking as if she environment. is searching for the answer. Then she answers. Cut to:
- SC. 62. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Teacher. Cut to:

TEACHER: (VO) Alice?

TEACHER: Yes, as a part of earth, the ocean is an area of great

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SC. 63. INTERIOR. DAY. STUDIO. (CLASSROOM) Another angle. Teacher. Cut to:

SC. 64. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. David. Cut to:

SC. 65. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Scott.

SC. 66. INTERIOR. DAY. STUDIO. (CLASSROOM) MS: Teacher. Cut to: influence in our environment, isn't it? Now, we've talked a great deal in these past months about man's relationship to his environment, haven't we? And what...in this relationship... did we decide had contributed much to the new developments in science? David?

TEACHER: (Continued)

<u>DAVID:</u> (PARROTING A POINT WELL LEARNED.) Man's constant striving to learn about his environment and to control it.

TEACHER: (VO) Um-hm. And does oceanography have a place in this changing picture? Scott?

<u>SCOTT:</u> Yes, ma'am! It's one of the newest and most active of all the science areas. Why, man has learned more about the ocean in the last twenty years than he's ever known before in all history!

TEACHER: That's wonderful, isn't it? But it's also rather puzzling. (VERY MOCK SERIOUS) Unless, of course, the <u>ocean</u> is new. Is it? Laura?

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- 14 -(CHILDREN LAUGH)

LAURA: (GIGGLES) No, ma'am. It's millions ... maybe even billions of years old.

TEACHER: Well, then...we've got a problem, haven't we? Or maybe a couple of problems. Why has man waited all these centuries to explore the ocean depths? And why ... now ... has he so actively begun? Would we like to find out?

PUPILS: Yes!

TEACHER: Good! Let's talk about this again tomorrow. From what we know now and the facts we shall have gathered by then ... we ought to be able to hazard one or two pretty good guesses. Now, after school, boys and girls ... I want you to .. etc...etc....etc...

NARRATOR: (VO) To borrow a phrase from oceanography ... Mrs. Arnold was taking soundings of knowledge and interest in her classroom. As she probed with picture study, music, and discussion

SC. 67. INTERIOR. DAY. STUDIO. (CLASSROOM) MS. Laura. Cut to:

SC. 68. INTERIOR. DAY. STUDIO. (CLASSROOM) WIDE ANGLE: Teacher and Pupils.

SC. 69. INTERIOR. CLASSROOM SET. MLS. Faces of children.

SC. 70. CU Teacher.

DISSOLVE TO

SC. 71. LS kids getting out of school. (no one recognizable)

DISSOLVE

SC. 72. INTERIOR. LIBRARY. MS. Boy consulting with school librarian, checking out book.

<u>NARRATOR:</u> (VO) With selfdirected reading from the school library...

DISSOLVE SC. 73. INTERIOR. EVENING. HOME LIVING ROOM. MS. Girl looking over books on shelf, selects one, sits in chair to read.

NARRATOR: (VO) Or from the books at home.....

DISSOLVE

SC. 74. INTERIOR. EVENING. BOY'S BEDROOM. CU. (OVER SHOULDER) Boy making list of questions.

DISSOLVE

- SC. 75. INTERIOR CLASSROOM SET. CU. Narrator (in his spot sync)
 - NOTE: Clothes change for everybody but Narrator.

Narrator gestures toward class.

SC. 76. INTERIOR CLASSROOM SET (SYNC). MS. Narrator turns back to camera. <u>NARRATOR:</u> (VO) With lists of questions made by the pupils... to be considered by the class...

<u>NARRATOR:</u> (Sync) With vocabulary drill on words her pupils needed to know...she was searching out the peaks and valleys...the lowlevel arid stretches of nonawareness...which must be stirred up for future growth.

<u>NARRATOR:</u> (OS) The day before the lesson, Mrs. Arnold led her pupils further into the preparation which would make their television lesson more meaningful. Working in harmonious tandem with the television teacher...toward shared goals clearly stated in the Teacher' Guide...

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SC. 77. INTERIOR CLASSROOM SET. CU. Good tight shots of pupils.

she explored with them the anticipated "what" of the lesson content....while broadening their vision toward the "how's" and "why's" of a larger concept about man's learning and, thus, of course, their own.

NARRATOR: (Continued)

SC. 78. INTERIOR CLASSROOM SET (SYNC) MS. Narrator (in his spot) he gestures toward TV set.

NOTE: Same cothes as at beginning of film.

<u>NARRATOR:</u> (OS) I think now we are better prepared to rejoin Mrs. Arnold and her class on viewing day for the latter portion of the television lesson.

- SC. 79. UNDERWATER SET LS..TV TEACHER RIDES TRACTOR ONTO SET
- SC. 80. UNDERWATER SET. MS. Teacher near on tractor. Cut to:

SC. 81. UNDERWATER SET. MS. Teacher on tractor NEW ANGLE

- SC. 82. CU. Teacher. (Gestures toward saucer)
- SC. 83. UNDERWATER SET. MS. Saucer. Pull back to:

SC. 84. UNDERWATER SET. LS. Teacher on tractor. She leaves the tractor and moves to right foreground...as CAMERA PULLS BACK to reveal superstructure of ocean floor drilling rig...with TV lights and camera...and lines extending to the ship floating above. Cut to:

SC. 85. UNDERWATER SET. CU. Superstructure of drilling rig. Teacher indicates lines and pipe reaching to the surface. NATURAL SOUND

<u>TEACHER:</u> And now that scientists have solved some of our problems of survival in the ocean...we're ready to explore some of its "practical promises".

<u>TEACHER:</u> As a result, the ocean is a very busy place. New discoveries being made every day! New people coming and going!

TEACHER: Some of the underwater vessels are always on the go... taking scientists and other guests on tours of exploration and observation.

TEACHER: One of the most exciting things down here is the drilling method developed to get at the ocean's enormous oil reserves.

<u>TEACHER:</u> You see...here's the drill working away right here... hundreds of feet down...and from up there...hundreds of feet up... the whole operation is being

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TEACHER: (Continued) performed from an anchored ship by remote control.

Who keeps watch and does the drilling? Not divers. It's much too deep for them. No. The people on the ship do all that. How?

TEACHER: Underwater TV cameras keep an eye on the drilling while the drillers sit on the ship and watch the drilling on television just as you're doing.

TEACHER: It looks pretty simple from here now, doesn't it? But the problems were overwhelming for a while. What do you suppose some of them were? How do you suppose they were solved?

<u>TEACHER:</u> Now, oil isn't the only source of wealth under the ocean. Already the ocean is wellrepresented in the sky...in magnesium from which most of our planes are built.

TEACHER: One of these years we may hear about a gold rush under

SC. 86. UNDERWATER SET. CU. On drilling rig. Cut to:

SC. 87. UNDERWATER SET. MS. Oil drilling rig. Cut to:

SC. 88. UNDERWATER SET. WIDE ANGLE. Teacher moves over to big rock at left of screen. Leans against the rock.

SC. 89. UNDERWATER SET. DIFFERENT ANGLE. Teacher.

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Teacher reaches down, picks up lobster.

SC. 90. UNDERWATER SET. CU. Lobster held by teacher. Cut to:

SC. 91. UNDERWATER SET. Ocean floor. MS. Teacher with lobster.

She puts lobster on a rock.

Teacher moves to nodule collector.

- SC. 92. UNDERWATER SET. MS. Teacher with Manganese nodules. She picks up some of them.
- SC. 93. UNDERWATER SET. CU. Manganese Nodule.

TEACHER: (Continued)

the waves. Right now the recovery of gold from this enormous amount of water seems hopeless. But we may someday have some help from the ocean itself.

<u>TEACHER:</u> For instance, cobalt is even scarcer than gold...but this clever fellow...the lobster... manages to extract it from the water.

TEACHER: Perhaps...someday... we'll simply select marine plants and animals to do our mining for us.

Or maybe we won't need to bother with such trivial wealth. If you could look along vast bottom areas of the ocean...you would see something that looks like this.

TEACHER: No. These aren't burned potatoes. They're lumps of wealth beyond belief...mysteriouslyformed nodules of minerals... 10 million dollars worth to the square mile. All along the ocean floor they lie...these blackish

SC. 94. UNDERWATER SET. CUT-OUT. Nodule Collector.

- SC. 95. UNDERWATER SET. MCU. Vacuum cleaner.
- SC. 96. UNDERWATER SET. MS. Teacher.

Teacher gestures to the suction pump fishing apparatus in the left foregound as CAMERA PULLS BACK to reveal it.

SC. 97. UNDERWATER SET. STUDIO. CAMERA PULLS OUT as teacher walks into frame and sits or leans on tractor. Cut to: - 20 -

<u>TEACHER:</u> (Continued) bumps of treasure...more mineral wealth, it's said, than the human race has mined in all its history. How will they be scooped up?

TEACHER: Perhaps by a nodule collector like this...proposed by Oceanographer John L. Mero. Only time will tell. Let's take a good look at this fabulous gadget. Without the propellers, gyros, and floats to keep the pipe positioned in the ocean depths...and the television cameras to spot nodules ...it looks very much like something we already know.

TEACHER: That's right, a vacuum cleaner.

TEACHER: ...when the principles on which a vacuum cleaner operates are adapted to the specialized demands of this new environment. The vacuum cleaner principle can be used in another way...to harvest fish on a fish farm.

TEACHER: I'd like to have a fish farm. IF it weren't for the "weeds" eating up all the food. Does that

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TEACHER: (Continue1) sound strange? Well, many things down here are strange...and they get even stranger when man starts adapting his dry land ideas to the ocean. You see, "weeds" to a fish farmer aren't plants. They're tiny inedible creatures...

TEACHER: Like this brittle star ...

TEACHER: And this starfish

<u>TEACHER:</u> Which, we are told, eat up all but a tiny percentage of the fish food in the sea. You need a tractor, all right, but to clear <u>these</u> weeds, I'll probably have to trade mine in on a pressureproof submarine model.

<u>TEACHER:</u> Even then, you know, fish farming wouldn't be easy. How can we get our fish-crops to "stay put" and grow...instead of swimming away? The answer, scientists think, may be to fence them in...using what is known about how fish react to color, noise, and disturbed water.

- SC. 98. UNDERWATER SET.. STUDIO. CU. Brittle Star. Cut to:
- SC. 99. UNDERWATER SET. STUDIO. CU. Starfish. Cut to:
- SC. 100. UNDERWATER SET. STUDIO. CU. Teacher. Cut to:

SC. 101. UNDERWATER SET. STUDIO. MS. Teacher. Cut to:

- SC. 102. UNDERWATER SET. STUDIO. NEW ANGLE. Teacher. Cut to:
- SC. 103. UNDERWATER SET. ART WORK CLOSE TO CAMERA. A baby whale (cut-out) slowly crosses the screen... followed by the mother whale (cut-out)...

As the whale's head gets almost across the screen, it winks its eye. TEACHER: If this doesn't work, I'11 probably have to give up aquaculture. Of course, I might take up whale ranching.

<u>TEACHER:</u> (VO) They say <u>that</u> could be very profitable in the future. Because in addition to everything else she has of value, the mother whale gives a ton of milk a day!

Maybe she'd even teach me to breathe under water. I know scientists predict someday man can have gills imposed by surgery. But I don't think I want gills. Whales don't need them. I'd rather just get the whale to tell me her breathing secret.

(DIRECTLY TO CAMERA...COMTEMPLA-TIVELY)

Whale moves on to wipe screen. Fade out. TV SCREEN What <u>could</u> it be? SHORT CURTAIN MUSIC....

CUT TO:

LESSON SEGMENT ENDS

SC. 104. INTERIOR. DAY. STUDIO. (SYNC) <u>NARRATOR:</u> The television lesson (CLASSROOM) CU: NARRATOR (HEAD SHOT-SYNC) is over. What do you as a classroom teacher do now? The answers

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NOTE: NARRATOR HAS TO BE VERY FORCEFUL HERE.... HE HAS TO CARRY THIS PART <u>ALONE</u>.

SC. 105. MS. NARRATOR (HEAD AND SHOULDER SHOT) (SYNC)

SC: 106. INTERIOR. DAY. STUDIO: Narrator. CU: NARRATOR (HEAD SHOT -SYNC) 23 -

<u>NARRATOR:</u> (Continued) will be found in the objectives of the television lesson...in the goals for which you and the television teacher share a mutual responsibility. It will help you more perhaps to ask yourself these direct and specific things. "What do we want to happen from this lesson and from what my class and I do with it? What behavior do we want to result?

<u>MARRATOR</u>: (OS) "What are the best ways to bring about such behavior... taking into account these children as pupils and people...myself as a teacher and person...the nature of this lesson...and the conditions of our learning situation?"

<u>NARRATOR:</u> Your immediate and short-range responsibility is to give the lesson its due. "Revisiting" the lesson with your class will help to reinforce its ideas, make its structure clear, highlight its spirit and appeal, straighten out misunderstandings.

NARRATOR: (Continued)

Let's look in on Mrs. Arnold and her class as they revisit their television lesson about oceans....

FADE OUT SC. 107. FADE IN INTERIOR. DAY. STUDIO. (CLASSROOM) CU. The word "oceans" being written on the blackboard by Mrs. Arnold. ("This is the last word in No. 4 of "Main Ideas".) The "Main Ideas" are listed on the blackboard ... and around them are words. phrases, random statements. singly or in groups, marked through, joined by brackets or transitions to lines between "balloons", etc.... all this indicating efforts of Mrs. Arnold and class to coalesce and structure random thoughts and impressions from the television lesson. (SEE PAGE SHOWING BLACKBOARD CONTENTS.)

SC. 108. CAMERA ON BLACKBOARD and continues to explore contents of blackboard as teacher is heard off screen.

> Pull back to see teacher. And all necessary props already on set.

SC. 109. MS. Teacher and class

<u>TEACHER</u>: All right, class. We talked about the main ideas in the television lesson. We've explored briefly how the lesson as a whole made us <u>feel</u>. We've listed some of the surprises we found in it. Now as we check the lesson to see which of our questions were answered...and which ones we will need to explore further...let's remember the two big questions that started us on our investigation. "WHY HAS MAN WAITED SO LONG TO EXPLORE THE OCEAN DEPTHS?"

"WHY NOW HAS HE SO ACTIVELY BEGUN?"

SC.110. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. Poster bearing questions

> CAMERA in tight on first question. Cut to:

SC. 111. INTERIOR. DAY. STUDIO. (CLASSROOM)

> CU: Poster bearing questions. CAMERA PANS DOWN to second question. Cut to:

SC. 112. INTERIOR. DAY. STUDIO. (CLASSROOM) CU. The word "WHY?" on blackboard. Teacher writing. CAMERA pulls back to reveal teacher writing also:

> Knew -Felt - HYPOTHESIS Saw -Read - Guess

"We think probably -- "

Observe - Explore -Experiment

CAMERA moves in to tight shot of teacher's hands demonstrating scale. Lap dissolve to: TEACHER: (VO) Laura...will you read the first question!

LAURA: (VO) Why has man waited so long to explore the ocean depths?

TEACHER: (VO) Now, the second one...,David...please.

<u>DAVID:</u> (VO) Why...now...has he so actively begun?

TEACHER: Yesterday, boys and girls, out of everything we knew, had read, had seen, had felt...we built ourselves a guess...a hypothesis...a "we think probably" answer to these two important why's. Now, we're ready to check our guess against the facts as we find them in today's television lesson... and elsewhere. We were saying, weren't we, that when the forces FOR knowing and the forces AGAINST

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TEACHER: (Continued)

knowing are in balance...man's learning stops. That meant, we decided, that scientific exploration stops. And we guessed that THAT was what had happened about the ocean. But we said further that something had tipped the scales toward knowing...and that there were two ways this could happen.

SC. 113. CU NARRATOR (IN HIS SPOT - SYNC) NARRATOR: (OS) Because her pupils are with her all day .. and because time, space, and scheduling are more flexible in the elementary classroom situation, Mrs. Arnold is able to explore some subject areas in considerable depth, where she feels this is in the best interests of her class. Feeling that important insights were at stake here, she used these insights as a basis for long-range utilization of the television lesson in NOTE: Clothes change for everybody but the activities for the whole class Narrator. and for smaller groups.

SC. 114. INTERIOR CLASSROOM SET (Another Day) (SYNC) Balance Scale (constructed by artist - perhaps paper sculpture) made by Bryan. The hanging sides hold paper balls or pieces of colored posterboard marked with the specific feelings. Cut to:

SC. 115. INTERIOR. DAY. STUDIO. (CLASSROOM) MCU. BRYAN with scales and book exhibit. As Bryan speaks, CAMERA EXPLORES this exhibit, which bears the slogan: WHAT TIPPED THE SCALES?

CAMERA PULLS BACK AND PANS LEFT TO:

ALICE...on other side of scales exhibit

Alice picks up a large paper ball labeled NEED.

She shows inside this large ball smaller balls labeled: Population explosion Depletion of land resources Defense

Alice demonstrates as she talks...lifting the colored paper balls cued to the narration...removing them from the scale. BRYAN: (SYNC) Either some feeling TOWARD knowing had been ADDED TO this side...making it heavier. Or some feeling AGAINST knowing had been TAKEN FROM this side... making it lighter.

<u>BRYAN:</u> We asked ourselves what these things could have been...to bring on all the activity about the ocean. And to tell you what we guessed...here is another member of our Report and Exhibit Committee ...Alice Black...

<u>ALICE:</u> Well, we guessed that the feeling which had been added to the TOWARD knowing side of the scale was man's feeling of NEED... need for food...wealth...and security...brought on by the population explosion...the depletion of our resources on land...and danger of military attack. But some feelings had also been removed from the AGAINST knowing side of the scale, making it lighter. Fear and helplessness had been removed by new inventions which helped man to operate more successfully in SC, 116. CU.NARRATOR (IN HIS SPOT - SYNC)

SC. ____ MS. TEACHER AT DESK WATCHING PUPILS. (?)

(NOTE TO DIRECTOR: This paragraph typed from memory. Please correct to exact wording which I gave you in Dallas. Am leaving scene numbers blank, so if you don't have this shot of the teacher, your scenes will not be misnumbered. If you do have this scene, the NARRATOR goes VOICE-OVER AT THIS POINT.)

Cut to:

SC. _____. MS. BRYAN DISMANTLING SCALES EXHIBIT. PER-HAPS PACKING IT IN BOX. ALICE OBSERVING. <u>NARRATOR (OS)</u>: As interest in this new science area was widespread and enthusiasm was high, Mrs. Arnold took this opportunity to develop her pupils' own special abilities to their fullest extent.

Watching these pupils as each, in his own unique way, pursues his course into further learning, the teacher reflects on individual strengths and needs...and what these suggest for the future.

TEACHER: (VO) Bryan works best with other children. His hands lead his mind...and we can depend upon him to demonstrate concretely... with artistic visuals...like the

ALICE: (Continued)

the ocean depths. The aqualung, for instance. And the underwater deep-diving and exploration vessels. And hopelessness had been removed by new encouraging discoveries. TEACHER: (VO) (Continued) scales here...the abstract concepts toward which other children sometimes move more quickly...taking Bryan with them.

TEACHER: (VO) Alice is our saddle= burr...doubter...realist...sometime scoffer. We want to preserve her critical qualities...her "nose" for fallacies among the facts...while directing her reactions into more thoughtful and constructive channels.

TEACHER: (VO) Scott is <u>our</u> vacuum cleaner...adapted to garnering information. He scoops up facts like a suction pipe harvesting fish.

TEACHER: (VO) In his hands, this poster and the notebook he is preparing to go with it will provide a comprehensive resource for the other pupils...impressing upon the maker and the users the whole complex of sciences represented in Oceanography.

SC. _____ MS. ALICE DIS-AGREEING WITH OR CRITICIZING SOME-THING BRYAN IS SAYING OR DOING.

SC.

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____. TIGHT SHOT. SCOTT AT TABLE. WORKING ON POSTER. "SCIENCES IN THE SEA"

SC. ____. CU. (OVER-SHOULDER) SCOTT WORKING ON POSTER: "SCIENCES IN THE SEA." SC. _____, CU. MOBILE. David's hands attaching to a hanging element that says "Briny" another hanging element. CAMERA PULLS BACK as David reaches for a third hanging element.

SC. _____ CU. MOBILE ELEMENT which says: "DEEP," Elements nearby contain information on depth of ocean...Marianas Trench..Continental Shelf. (SEE SPECIFIC MOBILE LIST.)

TEACHER: (VO) For David, words are the Pied Pipers enticing him into a consideration of "how's"... "why's"...and "what's."

TEACHER: (VO) His "Cliche Mobile" makes David and all of us take a new look at the tired and pallid generalities we have mouthed so long about the vivid, vigorous, forever old, forever new ocean.

- SC. ____. MS. DAVID CHECKING NEXT STEP IN MOBILE.
- SC. ____. LS. CLASSROOM DOOR. Door opens. Laura enters, followed by custodian carrying heavy bronze statue, a drape of velvet, a painting.
- SC. _____. MS. LAURA DIRECTING CUSTODIAN TO TABLE ACROSS THE CLASSROOM.

she straightens.

SC. _____. MLS. LAURA AND CUSTO-DIAN ARRIVING AT TABLE. He deposits his load the prese and exits. Laura arranges drape over statue. CAMERA PAND DOWN as she leans to prop painting touch, sm on floor against front of table. PANS UP as has a him

<u>TEACHER</u>: (VO) Laura...the eternal feminine...who could coax a lobster out of his shell!

NATURAL SOUND (SYNC) CLASS BACK-

GROUND

<u>TEACHER</u> (VO) Laura vibrates to the present and the pleasant. The things she can see, hold, touch, smell...especially if it has a hint of the theater about it. SC. ____. CU. LAURA. She is arranging some smaller art objects...a small vase...a small pot... a decorated box...some costume jewelry...on the drape. CAMERA IN TIGHT on table slogan which reads: "DEEP OCEAN ART GALLERY. Treasures from Sunken Ships."

NOTE: Career Day will already be set up at SC. 117

SC. ____. CLASSROOM. WIDE ANGLE. One section of classroom only. "Career Day" tables set up in class. room. GROCERY STORE with specialty foods from the sea. PHARMACY with io. dine, antibiotics, etc. MEN'S CLOTHING STORE with diving gear. CAMERA EX. PLORES these tables... continuing throughout Teacher's dialogue...

> ENDING AT table where boy in official looking uniform is talking to uwo visitors (from the members of the class.) Slogan on his table reads: "DEEP OCEAN CONTROL AUTHORITY. Legal Advice Available."

TEACHER: (VO) Laura's older brother is the idol of her life. Small wonder that when Career Day at his high school happened to follow our television lesson, Laura decided we must have a Career Day of our own...in the ocean's depths. And only Laura could have wheedled, smiled, and pouted most of the class along in the wake of her project "inspiration."

<u>TEACHER</u>: (VO) This is a bit fancier than our activities usually get. But the ocean for these landlocked children was a wonderfully stimulating place.

For me, their teacher, it presented an unusual opportunity to move them toward insights into man's motivations...his visionary and practical natures...his driving urge to impose his human stamp upon the world around him... to move them toward open-mindedness leavened with critical judgment... and responsible behavior. <u>TEACHER</u>: (VO) Television is a resource which, in my experience as a classroom teacher, adds...to our classroom...dimensions we could attain in no other way.

<u>TEACHER</u>: (VO) Here at my finger tips is the invaluable help of my trained and talented colleagues who offer sound, carefully-planned learning materials of scope, impact, and immediacy. These are materials geared to our needs...directed toward educational goals which I.... as a teacher...accept and value.

SC. ______ MLS. NARRATOR ENTERS FRAME. (Class and teacher in BG.) NARRATOR TURNS TO CAMERA.

> CAMERA STARTS TO PULL BACK TO GET WIDEST SHOT OF CLASS-ROOM POSSIBLE.

START END MUSIC HERE (BG LEVEL)

FADE OUT MUSIC UP FULL ON LAST WORD.

<u>NARRATOT</u>: (SYNC) (TURNS TO CAMERA) In the learning experience you have just shared, television made accessible to this teacher and her pupils information too recent to be available in textbooks...presented in a way which could never be duplicated in the classroom...

Yet oriented to the latest of classroom procedures.

Yes...This is truly a learning envir ronment. It abounds in the resources from which lessons are made. Among these resources is television....

now available . . . Kit 5

A CASE STUDY IN THE ELEMENTARY SCHOOL

The film in this kit shows how one sixth-grade teacher used a television lesson on oceanography to reinforce important science concepts, to introduce a broader area of understanding and to stimulate group and individual activities appropriate to the needs and interests of her particular class.

also available . . . Kit 3

PREPARING THE TELEVISION LESSON

The film in this kit traces the preparation of an instructional television science lesson for the upper primary or lower intermediate grades. It demonstrates the steps involved in the production of a program, the amount of time and care given to make this a lesson which can be utilized effectively in the classroom.



THE FILM

Each kit contains a 16 mm sound film approximately 28 minutes in length. While the films make a complete presentation, they are in-

THE MANUAL

The teacher's manual contains information for both kits. It details how the films can be used and provides supplementary information for the group meetings. A copy of the manual will be sent to you at least two weeks prior to your use of the first kit so that you will have time to plan the teaching lessons. The manual will be returned with the kits. However, if you wish to retain the teacher's manual for your library, it may be purchased for \$2.50.

SERVICE CHARGE

There will be a \$5.00 Service Charge for each kit which you will keep for a minimum of five days. Arrangements may be made to use the kits longer. However, an additional fee of 50 cents per day will be charged.

HOW TO OBTAIN

There will be a limited number of copies of these kits available. The earliest orders received will be booked first. Place your orders as far ahead as possible, and wherever possible, give at least one alternative date. The kits will be sent prepaid, insured and are to be returned the same way.

To order, write or call: NAEB Teaching Materials Library c/o KFME-TV/Channel 13 Highway 81 South Fargo, North Dakota 58102

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NATIONAL ASSOCIATION OF EDUCATIONAL BROADCASTERS DEMONSTRATION KITS for utilizing Instructional Television

PURPOSE OF KITS

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To provide a coordinated series of demonstration kits to assist teachers and broadcasters in developing effective patterns of instructional television utilization in elementary and secondary classrooms.

HOW YOU CAN USE THESE KITS

These kits have been designed for group use in teacher's meetings, workshops, seminars, and university education classes. Each kit contains a film and a teacher's manual. Although each kit is self-sufficient and may be used individually, the materials have been designed as a coordinated whole. It is recommended that the kits be used in sequence. Scanned from the National Association of Educational Broadcasters Records at the Wisconsin Historical Society as part of "Unlocking the Airwaves: Revitalizing an Early Public and Educational Radio Collection."



A collaboration among the Maryland Institute for Technology in the Humanities, University of Wisconsin-Madison Department of Communication Arts, and Wisconsin Historical Society.

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